difficult to frame an agreement so definitive of the rights of all parties that it would be satisfactory to either the Government or to the parties themselves. Nothing short of a decree of a court of competent jurisdiction will suffice, for that alone can be either definitive or final.

A very casual consideration of the Hansbrough-Newlands Act will make apparent the absolute necessity for this settlement. It may be assumed that, from motives of self-interest--which in any case are always the safest to which to appeal--if from no others, the appropriators and the carriers of water in this valley urgently desire a prompt, definite, and final adjustment of these questions.

The variant interests may, in a broad way, be divided into two classes; that is, the water users and the carriers, where the user is not also the carrier. There will have to be settled among the one class, the users, the question of time and extent of appropriation of water, and as to them, the fact that the right to use water is appurtenant to the land for which it was appropriated. Among those of the other class, the carriers, assuming that they may preserve their autonomy, there will arise questions of their relative rights to divert and carry water. All these questions are preliminary to and independent of any consideration of the administration of stored water, and are questions in the determination of which the Government probably can not and certainly will not engage. They must be settled before we can go to the Government at all. It may be taken for granted that the Hansbrough-Newlands Act will be construed to authorize the construction of reservoirs for the storage of water for the irrigation of lands now in private

ownership for which there is only a partial and hence an inadquate supply. This construction seems easily warranted, and is in entire consonance with the purposes of the act.

The act also contemplates the organization of the owners of the lands irrigated by the reservoir or other works into an association for the management and operation of the works; but this management and operation will not, under the terms of the act, vest in such association until the major part of the cost of the works shall have been repaid to the Government.

The cost of the reservoir at Tonto (or practically all of it) will have to be assessed against the land that is held in private ownership, at a rate per acre to be fixed by the Government. This assessment will be divided into annual payments extending over a period of not more than ten years, and beginning at a time to be fixed by the Secretary of the Interior, probably when the reservoir is ready for service.

The act suggests that the Government will provide its own means for enforcing payment of these assessments, except possibly, and perhaps preferably, if the plan of association hereafter proposed shall be approved by the Secretary of the Interior and the association selected as the medium of the collection of these payments to the Government.

Now, if a plan can be devised whereby, first, all disputes among the variant interests concerned in the storage project may be settled so finally and definitely that the Government may have no concern in that respect; and, second, the owners of land now in private ownership and homesteaders under the act shall imitate rights to the use of the stored water in the manner outlined

in the act in such numbers as to warrant the Government in the belief that sufficient money will ultimately be repaid to reimburse it for its expenditure in the construction of the reservoir, then we have brought ourselves within the purpose and scope of the act and subjected ourselves to its conditions and have reason to believe that our application will be favorably entertained by the Secretary of the Interior.

To accomplish these things it is proposed to at once organize the association of water users contemplated by the act itself. They should incorporate under the laws of the Territory of Arizona. Those, and those only, whom have initiated rights, or may initiate rights to the use of water from the reservoir, should become constituent members. The act defines those to be homesteaders or owners of lands now in private ownership, who initiate rights to stored water under the provisions of that act.

The capital stock should be a sum equal to the estimated cost of the reservoir and other works undertaken by the Government and should be divided into a number of shares equal, at a conservative estimate, to the number of acres that may be so supplied with stored or other water. The division of the entire fixed capital by the number of shares so ascertained will of course fix the par value per share of the stock. As the proposed stockholders can not now initiate their water rights under the reservoir, and can not do so until the Government shall offer them for acquisition, the subscription for the stock should be for a cash payment for it at par, with a provision in the articles of incorporation, made irrevocable except upon proper consent of, say, the holders of three-fourths of

the stock; that the stock of any subscriber shall be deemed fully paid up upon the production by him of proper evidence that he has initiated a right under the reservoir, conditioned for forfeiture for his failure to comply with his engagement with the Government, or with the association as the agent of the Government for that purpose, in like manner and under the same circumstances as imposed by the Government, and that until that time the subscribers of the capital stock subscribed for shall not be subject to be called upon for payment of their subscriptions.

In no event does the proposed corporation deal with the Government in its corporate capacity in initiating or perfecting any individual right; all those negotiations are by the individual with the Secretary of the Interior, precisely as though there were no such corporation, or as though, if there were one, the individual was not a member of it. (Since writing this Mr. George H. Maxwell, in his address to the people here on August 9, 1902, suggested that the Government would probably prefer to deal with the association rather than with individuals who seek to acquire rights under the reservoir. If so, that would simplify matters, and the association could become practically the agency of the Government in that respect.

The initiation of the acquistion of the right and its final perfection are mere qualifications to membership of the proposed corporation, and it is the principal qualification required by section 6 of the Hansbrough-Newlands Act for membership in such an organization.

In making estimates the greatest care and the most conservative course should be taken. If error is made in fixing the estimate of cost too high and the extent of acreage of land too low

they can be corrected to meet the event with advantage to all; while if the estimate of cost is made too low and estimate of irrigable acreage too high the mistake can not be remedied. To exceed the limits ultimately and irrevocably fixed by conditions in the estimate of lands capable of irrigation by the reservoir is disastrous. We can expand to meet conditions; contraction is impracticable, if not impossible.

Until the management and operation of the works shall be turned over to the associated land owners having rights under the reservoir, the Government will of course have the administration of the stored water; and that, it may be assumed, will be in accordance with expressed wishes of the right owners whether expressed by them jointly through their association or by them individually. A partnership of Government and association is not proposed, nor can there be interference by the association, either with the purpose of the Government or its methods. Both are independent, seeking to accomplish a common purpose, with the association always subordinate to the Government, until by lapse of time and in the course of events, the management and operation of the works, by the terms of the law, vests in the association.

Now, it may happen that some may subscribe to these articles of incorporation who may never qualify by becoming the iniators of rights under the reservoir, either because they do not apply to become so or because there may not be enough rights to be had. To meet this condition a provision should be made that applications can be made for such rights within a reasonable time, failing which the subscribers shall become disqualified, shall be released

from his cash subscription, and shall lose his rights as a stockholder.

Incident to the power to manage and operate the work constructed by the Government as provided in section 6 of the act, are naturally the power to acquire the means of distribution of the water stored and developed--as waterways, pipe lines, flumes, gates, dams, etc.--and to acquire or use agencies for that purpose, and to manage and control any of these, according to the rules prescribed by the Government as to the stored water, pending the vesting of that management and operation in the association; and independent of that, but of course never inconsistently, to distribute other than stored water, as long and in so far as a distinction can be and is desired to be preserved between stored water and that normally flowing in the rivers. Those powers should be carefully defined and stated in the articles of incorporation and yet made comprehensive enough to meet any conditions existent or that can be anticipated.

There are now waterways and other means of distribution in the valley more or less adapted to the needs of distribution of stored as well as other water. Provision should be made for the use of these means, or such of them as may be expedient, and also, if after careful consideration it be deemed best, for the acquisition of new and other means. It seems almost too flat a truism to say that the Government will not undertake to store water if there are no means provided for its distribution to the users--and those means must be adapted to that purpose. It is true that the act may be construed to authorize the Secretary of the Interior to construct or otherwise acquire means of distribution of the stored water, but it seems unreasonable to expect it, under the conditions prevalent in

this valley.

As the means for the distribution of stored water is so necessary an adjunct to the storage works, the Government will naturally and logically require that the means of distribution shall be coextensive with the storage works themselves, entirely adequate to the service, and subject irrevocably to all the rules of practical use necessary to accomplish the purpose of the construction of the storage works--i.e., the use of the water so stored.

The owners of the present canals have certain rights--property rights--of which they can not be divested without their consent except by the exercise of the power of eminent domain. Yet it is extremely desirable that the means of distribution of all water, stored and other, shall be under the immediate and exclusive management and control of the water users. Several plans suggest themselves for the accomplishment of this desideratum.

If the canal companies, the owners of most of the canals, should preserve their autonomy and the ultimate title to their property, then a perpetual contract could be entered into between them individually with the association of water users, whereby:

First. The property shall be perpetually leased to the association for an agreed reserved rental, payable annually or otherwise, with a right to the association to purchase; or

Second. The canal company shall undertake to carry and distribute stored and other water to its customers at a reasonable cost, to be agreed upon between the company and its customers, subject, however, to the rules of the Government as prescribed by it for the distribution of stored water, and to the rules prescribed by the association for the distribution of both stored and other water,

not inconsistent with those prescribed by the Government, with an agreement to sell to the association.

Either of these plans fall short of the desideratum, and involve many difficulties. Still they are both practicable. Each of the above propositions, it will be noted, reserves to the association the privilege of purchase. Many contingencies, too numerous to mention here, but necessary to be considered, are to be met, as expiration of corporate franchises, existing contracts, mortgages, etc.; difficulties not insuperable, but tedious and complex in the working out.

A more desirable plan involves the purchase outright by the association of such of the canals and other works as may be found necessary or desirable for the purposes of the association. A rather anomalous situation would arise between the proposed association and the canal companies considered as possible purchaser and seller. There would be but one possible purchaser and that purchaser would be desirous to buy, and there would be but one seller and he would be desirous to sell; it would seem, therefore, that they should easily agree upon terms.

The maximum value of the property to be sold is simply the amount of money necessary to construct a new system of canals, etc., adequate to the carriage and distribution of both stored and other water.

If this plan of purchase were adopted it would have to be after it was found to be desirable--after negotiations had progressed so far as to determine the price and the terms of payment. The price should be satisfactory and the terms of payment should be so adjusted as to be conveniently met by the purchaser. In this plan, as in the

others suggested, there will be difficulty in adjusting the rights of lienors and others who will have to be dealt with before final consummation. The rights of water-right owners offer no obstacle, for if the association is formed as suggested, and a purchase of any or all of the canals are effected by it, the water-right owner's right is replaced by a better one in the association and merged in it, as will be hereafter explained.

Another plan, and the simplest, is to acquire the canals by the exercise of the power of eminent domain--by condemnation proceedings. This plan may be adopted to acquire the title to one or more of the canals, or of all of them seriatim, as the association may elect, the proceedure being entirely adequate to those ends. This plan eliminates in a great measure a consideration of the right of lienors, etc., as they are transferred to the fund created by the payment of the assessed damages.

Finally, the association may construct its own system of canals and other distributing works.

The cost of the several plans that may be considered might and should have considerable influence in the determination of the selection of a plan.

Now, as the raising of funds for meeting the cost under any plan: The articles of incorporation should provide that all the ordinary expenses of maintenance and operation should annually or at other stated intervals be estimated by the directors and assessed pro rata by the number of acres, against the stockholders, and that when an extraordinary expenditure is contemplated, as for the purchase, construction, or other method of acquisition of a canal or other works, exceeding in cost, say $5,000, the board of directors

shall formulate a proposition for the same to be submitted to the stockholders. The proposition should contain a statement of the purpose of the contemplated expenditure and the estimated amount of it, full enough to acquaint the stockholders in a general way of the purpose of the expenditure. Upon a resolution of two-thirds of the directors a special meeting of the stockholders should be called to consider the proposition submitted, and if holders of two-thirds of the stock should vote in favor of the proposition the directors should proceed to carry on the work proposed, and should assess the estimated cost thereof against the stockholders, as hereinafter proposed.

For the purpose of these extraordinary expenses the country embraced in the lands under cultivation by stockholders of the association should be divided into districts. These districts should be made severally to consist as nearly as may be practicable of lands immediately supplied by the canal system; as, for example, the lands under the Salt River Valley canal should constitute one district, those under the Maricopa another, those under the Utah another, and so on. Then when it is proposed by the association to expend money for an extraordinary purpose, as for the acquisition of a canal by purchase, condemnation, or construction, the cost should be assessed against the stockholders of the district particularly benefited, and among those in that district as they are individually benefited.

It should be provided that if in particular cases it should seem inequitable to assess the whole cost against a particular district, then the council should have power to direct what portion should be assessed, and what portion should be borne by the association at large.

If the proposed expenditure is not all required to be

What more concerns us is the fact that the art has been practiced in all ages and with success, and that such systems of water storage as are now in use and in contemplation in the Salt River Valley have brought wealth and content to millions in ages past.

Another lesson to be learned and prized, is the fact that where the science of irrigation was carried to its highest perfection, there the arts and industrial pursuits were most perfect and elaborate, and inestimably higher than the civilization of the dengerate races who inhabit those regions today.

It is not the intention of this report to go deeply into the history of the art of irrigation in all the ancient countries of the world, but no history of the subject would be complete without touching upon the system as practiced in the Salt River Valley in pre-historic times.

HISTORY OF IRRIGATION IN ARIZONA.

In Arizona are found remains of ancient canals, which with their laterals are nearly a thousand miles in length. One of the largest of these canals takes the water from the south side of the Salt River about 25 miles east of the present City of Phoenix. This canal runs for many miles through hard volcanic rock. The evidence of the immense amount of labor expended in the construction of this canal, which runs many

in one year the assessments may be made payable in annual or other periodical installments, adjusted so as to meet the expenditure as they may be required. The manner of enforcing the payments of such assessments is set forth in another place.

The articles should provide that the shares of stockholders should be complete evidence of the right of the holder to the use of the water for the irrigation of designated land at the rate of 1 acre for each share of stock, subject to the rules and regulations prescribed by the association therefor; that the ownership of stock should be evidenced by a certificate thereof, duly attested by the proper officers of the association, wherein the lands to which the water right is appurtenant are described with certainty sufficient to identify them; that the stock should be transferable on the books of the association, but as appurtenant to the lands described in the certificate, and the same should be deemed to pass, whether expressly conveyed or transferred by any conveyance of the land, or pro tanto any part of it, to the successor in title, whether such transmission of title is by grant or by operation of law. It should be further provided that any stockholder by the act of subscription shall pledge the land and appurtenances for which water rights are acquired and evidenced by such certificate of stock for the prompt payment of all assessments made in the manner prescribed by the articles, and that the lien for the payment thereof may be enforced by a sale of the land or so much thereof as may be necessary to discharge the same from time to time, and as often as such assessments are in default, such sale to be by the treasurer of the association, upon due notice, and at a place designated, with a reasonable time of redemption reserved. The particular provisions concerning the

enforcement of the collections of the assessments should be very definitely stated.

The creation of this lien will probably require the assent of the wife where the land is community property. It must be remembered that the whole matter, whatever plan be adopted, will, particularly at first, involve long and tedious labor. But there is no evading it, and it ceases to be formidable when it is considered that the work is no more difficult than the assessment of county taxes.

Each stockholder of at least one share should be allowed one vote at all corporate elections, and only one, whatever the number of shares he or she may own, and his or her qualifications as an elector should be determined by reference to the association's books as they appear, say, twenty days before an election. In no event should voting be permitted by proxy, but should be done at the designated polling place or places, by the stockholder in person.

Regular elections should be provided for, to be held annually for the election of directors and for the transaction of such other business as may be properly referable to the stockholders. These regular elections should be held in the spring, so as to be free from the influences of and the confusion incident to county and territorial elections. Specific rules governing elections should be provided, as for polling places, election boards, voting, canvass of votes and returns, etc. Provision should be made also for the calling and holding of special elections. There should be provided a council, in whom should be lodged the general legislative powers of the corporation as to making, modifying, or repealing by-laws for the

government of the members and the directors. The council should consist of, say, 40 members, who should be stockholders, one-half elected every year, and holding two years. This council should meet in regular session at designated times and places, and specially when called by the directors, or by a designated number of the stockholders. To this council should be left the general matters of the by-laws, the fixing of salaries, and compensation of officers, etc. They should serve without compensation and be governed in the transaction of their business by rules usually governing legislative bodies.

The immediate management of the affairs of the association should be vested in a board of, say, nine directors, and in such officers as the articles of the association or the council may prescribe. The board should hold regularly designated meetings and special ones in a manner to be prescribed by the by-laws. The directors should be allowed a proper compensation, to be fixed by the council. There should be a president, with the usual executive powers of that office, who should also be the presiding officer of the council. There should also be a secretary and treasurer exercising, respectively, the usual functions pertaining to those offices, who should be required to execute a proper bond in amount and with sureties prescribed by the council. Any proposition emanating from the directors that may involve an expenditure of more than $10,000 should be first approved by the council before it is submitted to the stockholders. The council may prescribe penalties for the infraction of by-laws and provide that those imposed, if not otherwise discharged, shall be added to the assessments against defaulting stockholders and

collected as assessments are.

A discussion of the rights of water users here seems unnecessary. That there is a priority of right to use water must be conceded. Priority of appropriation is the fundamental rule of all property; the first right to it was its appropriation, and every right is traceable to it. As with any other species of property, so it is with the property in the right to use water. If there is enough for all to take indefinitely, and as it is wanted, the exercise of the right by one person conflicts with that of no other, and priority becomes a distinction of no practical importance.

If the reservoir is built and fulfills our expectations there will be no distinction in practice in the distribution of stored water and other water, whatever its source, by the general reservoir and canal system. If it can be obtained, there will be applications for water for the 1,000,000 or more acres susceptible of service. But there will not be enough, there can never be enough, to meet the demand.

Then how shall applicants be served? It is the most logical, the most natural, the most just, and the most practicable plan to meet the demands in the order of the existing appropriations until they are supplied, and if there be a surplus then it may be supplied to new lands acquired by homesteading under the provisions of the Newlands law.

Enough has been said to demonstrate the necessity of speedily and finally settling the question of priority of rights of land owners within the territory proposed to be supplied by the Tonto reservoir. Two plans suggest themselves, the selection of one or the other much depending upon the readiness with which the

proposed beneficiaries approve of either.

One plan requires the agreement of all the water users to submit the question of the date of appropriation, the extent of the appropriation, and manner of use to arbitrators selected under the statute for award with a provision that the award shall be final, without appeal, and that the award be made a decree of court.

The other plan is to institute a suit in the district court, having all the waters users parties plaintiff or defendant, with the incidental right of omitted parties to make themselves parties; then to have the case submitted to a referee to report to the court his conclusions as to time and extent of the appropriation of each party, and in due course of time to obtain a decree of the court thereon.

It should be made a condition precedent to the acceptance of a subscription to the capital stock of the proposed association heretofore outlined, that the subscriber shall have agreed to submit these questions for settlement as proposed, or that the extent and time of his appropriation shall have been determined by one or the other of these proceedings. After the determination of these rights the owners of them should be classified, each by the year of his appropriation.

When the Government is ready to issue rights under the reservoir, preference should be given to applicants therefor according to the class in which their appropriations are found, preference being given to the oldest, and thence in order of time to the newest.

Reasonable limitations of time should be fixed within which this preference may be exercised, imposing upon a delinquent the penalty of postponement to await his turn at the last.

It is of course contemplated that after the plan here proposed shall be in operation there will be no pecuniary benefits accruing to the stockholders by way of profit of operation, and that when the cost of maintenance and operation has been provided for there can and will be no further charge to the water user.

The association will have no interest-bearing debt to be charged up against the water users. The cost of management and administration can be reduced to the lowest possible limit by concentration and systemization. Taking these things into consideration it is conservative to say that the cost of water to the user ought not to exceed 75 cents per acre per year. And this cost can be still further reduced from various sources of income.

The water impounded in the reservoir will afford power at a cost of one-fourth of that now paid for power in this valley, and even then produce a handsome income.

The cities and towns in the valley will need a supply from which an important income can be derived. Power could be transmitted to pump water for the Pima Indians and the requirements for that purpose would hardly make an appreciable diminution of the whole amount developed, and would afford them a greater, more certain, more constant, and a more reliable supply of water than they ever had. The power could be used to raise the water now stored and constantly renewed in the gravelly strata underlying the surface of the valley--an amount of important magnitude.

There are dangers, too, some of them already realized, that we will be better equipped to confront. For more than fifteen years there has been a constant diminution of the water flowing into this valley. Aside from the unusual meterological conditions that

have been prevalent for the last three or four years, this has been due to the constantly increasing diversion of water from the tributaries to our supply. And it is going unchecked. It would be one of the most important functions of the proposed association to check this encroachment. That no attempt has heretofore been made to remedy this sufficiently suggests that while the present conditions of diversity and antagonism of interests continue in this valley it need not be expected. With unity of interest it may be hoped for. We can not console ourselves with the hope that matters with us can not grow worse than they now are. Simple inactivity will make them worse. Whether the Government builds or aids in building the Tonto reservoir or not, to stay our progress to a disastrous end there must be a unification of the interests of the water users of this valley.

The plans and suggestions here submitted are tentative. The attempt has not been made to work out every proposal in detail. The desired result has been anticipated in each instance, the general means to the end has been suggested, and the filling in has been left for later time and for more varied and thorough deliberation.

If the plans and suggestions do not, or some of them do and others do not, meet with approval, yet if they have the effect of pointing out other and better ones, this paper will have justified itself.

WORK OF THE EXECUTIVE COMMITTEE.

An executive committee of eleven having been appointed, of which B. A. Fowler, chairman of the Water Storage Conference Committee, was made chairman, a general plan for the organization of the landowners and irrigators of the valley into a cooperative water users'

association was unanimously agreed upon and reported to a mass meeting held October 4, 1902, where subscription books were opened for what was to be known as a "preliminary" subscription approval of the plan. This carried with it no financial obligation or legal responsibility whatever. Its purpose was solely to procure from landowners an expression of willingness to "sign up", and by so doing to inaugurate a campaign of education which should reach every portion of the valley and thus bring about a better understanding of the whole proposition by the masses of the people.

The work of procuring "preliminary" subscriptions was pushed systematically and vigorously, until about 150,000 acres had been "signed up." Meanwhile the regular meetings of the executive committee were resumed, and Judge Kibbey was employed as legal adviser of the committee.

To Mr. Maxwell and Judge Kibbey is due much of the credit for the character and quality of the work finally embodied in the report of the executive committee. Each supplemented the other, and, to the finish, they worked in perfect harmony, safely guided by their sound sense, legal training, and wide experience in irrigation law.

Frequent meetings of the executive committee were held during November and December, 1902, and January, 1903. It was a comparatively simple proposition to reach a general outline agreement in October, but quite another to blaze a new trail--to formulate, without precedent or guide, articles of incorporation which should be broad in scope, clear in statement, carefully worded and legally phrased, just to all interests, and adapted to existing conditions. Of course, among eleven men of strong individual characteristics and personalities there were radical differences of opinion, views held tenaciously, much dis-

cussion (rather heated at times), and great deliberation. But to their everlasting credit be it said, there was no wrangling, no ill-tempered outbreaks, no attempt at sharp practice. The minority was of tough fiber, active, alert, everlastingly persistent and aggressive, but in the main fair, open to conviction, and amenable to just rulings, and at the last meeting of the committee joined in giving the chairman a unanimous vote of thanks for his fairness and unvarying courtesy, at times under very trying circumstances. The entire committee realized that only by "infinite patience and justice to all," as Mr. Maxwell put it at the first meeting, could success ever be attained and antagonistic interests be harmonized and unified--an achievement declared by many in the earlier days of the movement to be utterly impossible.

The opposition of the minority was due, first, to a reluctance to abandon old and adopt new methods; second, to an unwillingness to accept the principle, laid down in the national irrigation act itself, that water should be appurtenant to the land; third, to a fear of jeopardizing capital invested in so-called "floating water rights," which, it was feared, would become valueless if water was attached to the land; fourth, to unwillingness on the part of the owners of large holdings to subdivide, as required by said act, who yet wanted to become beneficiaries under it; fifth, to fear of a merger of the canal systems into one association, and consequent loss of local control; sixth, to ignorance of the plan proposed and the benefits expected; seventh, to pure selfishness and personal interests. One large landowner contended persistently for what he called a "regulation right" (for which he was willing to pay in the same proportion as other landowners), claiming that if the flood waters

which belonged to him could be held back in the Government reservoir and the flow "regulated", he would have all the water needed for his 7,000 acres. To have conceded this point would have been equivalent to a complete evasion of the provisions of the reclamation act, limiting the acreage on which a water right could be issued to 160 acres.

Naturally there was much discussion over the objects of the association; the power to be given to a centralized administration; the size of the reservoir district; the amount of capital stock, by whom it should be owned, how acquired, how canceled, and the rights incident thereto; the appurtenancy of water to land; the form of organization; the revenues, how raised; the expenditures, how safeguarded, etc.

The articles of incorporation, completed early in February, 1903, having been approved and adopted by the majority of the members of the executive committee, were submitted to the water-storage conference committee and by them approved and adopted, each one separately and then as a whole.

At once the articles were filed in the county recorder's office and with the secretary of the Territory of Arizona, and duly published as required by law, and then the Salt River Valley Water Users' Association became a legal entity.

The next step was to provide for the creation of a lien on the land, so that the Government might be assured of ample security for the cost of the construction of the reservoir, as required under the law. Without delay the articles were reprinted in contract form for signature by those who thereby became members of the association, and the work of procuring subscriptions to these formal

miles through hard volcanic formations that must have been excavated solely by the chipping process, is plain upon the face of the rock itself. While other evidence is found in the vast number of worn out stone axes and hammers along the sides of the canal.

The storms and winds of ages had almost filled this old canal, when it was discovered by a party of Mormons who cleaned away the accumulated debris and restored it to its original purpose and usefulness, thus converting the barren wastes along its sides into fertile alfalfa fields and orchards. This canal is now known as the Mesa canal, and supplies Mesa City and vicinity with water for irrigation and other purposes. About two miles east of the Mesa canal, but on the north side of the river is the starting point of the great Arizona canal - the largest in the southwest, if not on the Pacific coast, carrying as it does nearly 50,000 inches of water. The location and direction of this great ditch was also suggested by the remains of a pre-historic canal that could be traced for many miles, and the promoter of the new enterprise, in the firm belief that what had been done could be done again under like conditions, had the pleasure of seeing completed a water way which reclaimed over 100,000 acres in and around the City of Phoenix.

Portions of this canal have been reclaimed, but those parts which modern civilization has not touched are still so distinct that their depressions may be traced without difficulty for some 50 miles, while between it and the Gila River, in the

contracts of membership was begun under the direction of a subscription committee, who divided the valley into districts and appointed in each district the best men to be had as solicitors, with instructions to see every landowner and urge early action in "signing up". These contracts called for the signature of the landowner, and wife if married, and a legal acknowledgment by each signer before a notary public.

The shares, when so subscribed for, became appurtenant to the land, one share, and no more, being allotted to each acre of land, under the articles of association, which also limited the voting right of any one landowner to 160 shares.

From time to time, in order to hold up and stimulate the general interest, public meetings were held in various sections of the valley.

Throughout the entire campaign the local press without exception did valiant work, not only in disseminating news of the progress made from day to day, but also by pointed and vigorous editorials clearly setting forth the situation, unqualifiedly indorsing the movement, and urging all landowners to "sign up" and become members of the association without unnecessary delay.

This work was continued with varying success, but persistently, hopefully, and without cessation from early in February to July 17, 1905, when the books were closed with a total of about 200,000 acres subscribed.

A report was then made to the Government, embodying a brief; a complete list of subscribers, giving date of subscription, names, and acreage; a map in colors, showing at a glance what lands and how much each subscriber has signed up, and the grand total; a copy of the articles of association; and also a copy of the by-laws, so far

as drawn (it being the policy of the association to draft only such by-laws as experience from time to time showed to be wise and needed). These having met with the general approval of the Secretary of the Interior, the preliminary work of construction was begun by the reclamation service in the fall of 1903, and the first large contract for the construction of the power canal, was signed by the Secretary of the Interior in March, 1904, and thereafter the work was pushed energetically toward completion.

REPORT OF THE EXECUTIVE COMMITTEE OF THE WATER-STORAGE CONFERENCE COMMITTEE OF THE SALT RIVER VALLEY.

Phoenix, Ariz., October 2, 1902.

The executive committee of the water-storage conference committee of the Salt River Valley respectfully submits to the general committee the following report:

We have given the most careful, exhaustive, deliberate, and impartial consideration to the problem of the formulation of a comprehensive general plan which would remove the obstacles to be overcome, and enable the landowners and water users of the Salt River Valley to unite their interests and influence in a combined and determined effort to secure the construction of the Salt River reservoir by the National Government.

We have unanimously agreed upon the general plan hereinafter set forth as one which will, in our judgment, if it is adopted and carried into effect by the people of the Salt River Valley, enable them to obtain for themselves the great benefits which water storage would bring to this community and to every member of it.

We believe success in this movement depends wholly upon the people themselves. With a united community there is every assurance of success, and we urge upon every citizen of the Salt River Valley the imperative and urgent importance in this critical period in the history of our development of working shoulder to shoulder to carry out the plan suggested by this committee and set forth in this report.

The national irrigation act does not contemplate or authorize the construction of a reservoir by the National Government for the storage of water to be delivered to a canal company, and by that canal company carried and delivered to the water users, where the canal system is operated and controlled by neither the Government nor the water users. The water must be delivered and distributed to the land to which the right to its use has by the Government been made perpetually appurtenant, either through a government canal or through a canal owned, operated, and controlled by the owners of the lands entitled to water.

It is for this reason necessary that such of the canal companies or systems in the Salt River Valley as will carry water from the reservoir to the lands on which the Government will locate reservoir rights shall be transformed into cooperative landowners' companies or merged into one such company, which shall undertake the duty of distributing the water from the reservoir so that every landowner holding a Government reservoir right shall be assured of a corresponding right to have his water carried to him from the reservoir to the land on which he may be entitled to use the water for irrigation. The storage of the water is not the only thing to be considered. Its distribution under a plan which will conform to the

requirements and provisions of the national irrigation act is equally necessary and important, and must be arranged and provided for before we can secure the construction of the reservoir by the Government.

It is likewise necessary, in view of the existing local conditions in the Salt River Valley, that some plan should be adopted whereby the Government can deal with all the owners of lands to which reservoir rights are to be issued as a unit.

The Government would not and could not undertake to collect water rates from a large number of landowners for water delivered to them from the reservoir through canal systems over which the Government had no control, and we believe that no plan could now be devised or carried into effect under which the Government would assume control or acquire the ownership of the distributing systems in the Salt River Valley. It must be recognized that this is impossible.

A plan must be adopted which will guarantee and insure to the Government the prompt payment in full when due of each and every annual installment of the total cost of the reservoir in each of the years during which these installments will be due and payable to the Government. The Government must be assured that these payments will be made beyond any question, and that the Government will never be involved in any complications or entanglements. As to these matters, the position of the Government must be made absolutely safe and certain, and we can not expect it to act until that has been done.

We therefore recommend, as suggested in the plan proposed to the committee by Judge Joseph H. Kibbey, that we should first organize the association of water users contemplated by the national irrigation act itself. The shares in this association should be perpetually and inseparably appurtenant to the land on which they are originally issued.

This association, when formed, should embrace all landowners desiring to acquire rights to water from the reservoir, and should be the agency to receive the water from the Government and distribute it to the landowners entitled to its use, or to the respective canals controlled and operated by such landowners, to be by such canals carried to the lands to be irrigated, under such rules and regulations as may be established by the association of water users and the respective canal systems, and approved by the Secretary of the Interior.

This association of water users should also be the agency through which all collections from landowners of moneys due the Government should be made and through which the full amount of each annual installment due the Government each year should be paid all at one time in a single lump sum each and every year when the same is due.

It should be borne in mind that the national irrigation act contains the following clause:

"That nothing in this act shall be construed as affecting or intended to affect or to in any way interfere with the laws of any State or Territory relating to the control, appropriation, use or distribution of water used in irrigation, or any vested right acquired thereunder, and the Secretary of the Interior, in carrying out the provisions of this act, shall proceed in conformity with such laws."

The foundation of the whole structure upon which the national reservoir and all rights to water from it and every detail of the plan of distribution of that water is that under no circumstances that can arise shall there ever be any interference in any way with any

vested right to water from the Salt or Verde rivers. All such rights will be protected by the laws of the Territory and of the National Government, and the plan we propose does not contemplate any surrender or modification of any of those rights. They will continue to exist just as though no reservoir was contemplated or built. We think, however, that it would be desirable that all such rights should be adjudicated at as early a date as may be feasible or practicable. It is not necessary, however, in our judgment, that this should be done as a dondition precedent to the construction of the reservoir or before its construction should be authorized and begun by the Government.

It must be further borne in mind, and the fact should never be lost sight of, that the national irrigation act further provides that--

"No right to the use of water for land in private ownership shall be sold for a tract exceeding 160 acres to any one landowner, and no such sale shall be made to any landowner unless he be an actual bona fide resident on such land or occupant thereof residing in the neighborhood of such land, and no such right shall permanently attach until all payments therefor are made."

No landowner will be able to acquire a grant of a reservoir right from the Government unless he shall, before the completion of the reservoir, have brought himself clearly within the letter and spirit of the act in these particulars, and this will necessitate the subdivision, before the completion of the reservoir, of much of the land in the valley into 160-acre tracts where now held in large tracts.

After a full consideration of the matter we have decided that it will be for the best interests of the people of the Salt River

Valley to recommend the construction of the reservoir with a capacity of 1,478,750 acre-feet, the approximate estimate of the cost of the same being $8,549,231.

With a view of carrying into effect the foregoing general plan the following resolutions were adopted by your committee:

Resolved, That it is the sense of this executive committee that a district should be created with Maricopa County, Ariz., composed of land under the present canals now distributing water within the following-described boundaries:

Commencing at a point on the right bank of Salt River at the mouth of the Verde River; thence in a southerly direction to the headgates of the Arizona canal; thence in a general westerly direction along the north line of the right of way of the Arizona canal to the end thereof, at or near the quarter corner between sections 5 and 6, township 3 north, range 1 east; thence west to the left bank of the Agua Fria River; thence in a southerly direction along the left bank of the Agua Fria River to a point in section 14, township 1 north, range 1 west, where the line of the St. Johns canal intersects the Agua Fria River; thence in a southeasterly direction along the north line of the right of way of the St. Johns canal to the north bank of the Salt River; thence across the Salt River to a point in section 35, township 1 north, range 1 east, where the east line of the Gila River Indian Reservation intersects the south bank of the Salt River; thence in a southerly direction along the east line of the said Gila River Indian Reservation to the township line between townships 1 and 2 south; thence following the boundary of the said Gila River Indian Reservation east along the said township line to the range line between ranges 4 and 5 east; thence south between

ranges 4 and 5 east; thence east, between townships 2 and 3 south, to the east line of the right of way of the east branch of the Consolidated canal; thence north, following the east line of the right of way of the east branch of the Consolidated canal to the south line of section 2, township 2 south, range 5 east; thence east to the section corner common to sections 5, 6, 7, and 8, township 2 south, range 6 east; thence north between sections 5 and 6 east, township 2 south, range 6 east, to the east bank of the Highland canal; thence in a generally northern direction along the east bank of said Highland canal to the left bank of the Salt River; thence in a generally northerly direction along the left bank of Salt River to a point opposite the mouth of the Verde River, and thence across Salt River to the place of beginning.

It is further

Resolved, That a water-user' association should now be organized, and that subscriptions should be opened for shares of stock therein, each landowner within the above district to be entitled to subscribe for one share of stock for each acre of his land, each subscription for such share of stock to embody an application for and an agreement to take a reservoir right for the same acreage, or such portion thereof, as may be authorized by the Secretary of the Interior.

It is further

Resolved, That it is the sense of this committee that the lands now under cultivation should be given the first opportunity to secure reservoir rights, and that reservoir rights should be allotted only to holders of shares in the said water-users' association, and this committee believes that under a system of water storage, in view of the water-supply records of the Verde and Salt rivers as prepared by the United States Geological Survey, and the court

water commissioner of Maricopa County, that it would be unwise to attempt to cultivate more than 200,000 acres with the entire known available water supply--this supply including the natural appropriated flow of the Salt and Verde rivers, the flood waters to be stored, and the water to be pumped by the power developed at the Salt River reservoir, it being estimated that the amount so pumped will approximate a supply of not less than sufficient to irrigate 20,000 acres.

It is further

Resolved, That the foregoing resolutions be presented to the Secretary of the Interior as the earnest recommendation of this committee.

It must be understood that all the recommendations contained in this report and embodied in the plan proposed are subject to any modification which should be advised by the Secretary of the Interior under the authority given him by the national irrigation act, and that we can do no more than recommend to him what in our judgment is the best plan to be adopted.

It was further

Resolved, That the number of shares of the capital stock of the water-users' association should be limited to 250,000 shares and that the flat price per acre, which would be the par value of said shares, be fixed at $12.50 per acre, payable in ten equal annual installments of $1.25 per acre per year each, commencing at whatever time shall be fixed by the Secretary of the Interior as the time when the first installment is due the Government upon the reservoir rights to be issued by it.

It was further

Resolved, That a subscription book be prepared containing the report of this executive committee, followed by a statement that the undersigned approve the foregoing plan, and will subscribe for the number of shares and acreage set opposite their respective names, subject to their approval of the articles of incorporation and by-laws of the merger association to be hereafter prepared, and that the said book be presented to the general committee at its meeting on Thursday, October 2, 1902, and that if the said report of this committee be adopted by the general committee the subscription list should be immediately opened, and that the members of the executive committee and general committee, and any other persons desiring to do so should have the privilege of signing the same.

ARTICLES OF INCORPORATION.

Know all men by these articles of incorporation that we, the undersigned, have associated ourselves together under the laws of the Territory of Arizona as a body corporate.

ARTICLE 1.

The name of the corporation shall be and is Salt River Valley Water Users' Association.

ARTICLE 11.

The names of the incorporators are:

Frank T. Alkire, E. J. Bennitt, J. Wilfred Broomell, A. J. Chandler, Vernon L. Clark, O. H. Christy, William Christy, W. W. Dobson, W. S. Dorman, B. A. Fickas, B. A. Fowler, S. S. Green, C. R. Hakes, James G. Hammels, C. T. Hirst, H. A. Hughes, C. C. Hurley, F. T. Hurley, James Johnson, Emery Kays, W. J. Kingsbury, Wallace A. MacDonald, H. C. Mann, M. W. Messinger, Lin B. Orme, F. H. Parker, Thomas W. Pemberton, Alfred J. Peters, J. E. Price, L. J. Rice, L. D. Rousseau, H. Simkins, M. A. Stanford, C. S. Steward, J. A. Stewart, S. S. Stout,

lands which were formerly irrigated from it, can be found the relics of ancient civilization in profusion, not only in the shape of ruined buildings, but in pottery, stone implements, weapons, ornaments, etc.

"The Acequa of the painted rocks," which is found about 40 miles west of the Arizona canal and a few miles below the junction of the Salt River with the Gila, is even of more interest than those already mentioned.

The location of this ditch is proof of the excellent judgment exercised by the ancient inhabitants, inasmuch as it commences where it can take from the Gila, not only the waters of that stream, but also, the water of the canals lying north and east of it.

The question naturally arises, how great was the skill and ingenuity this pre-historic people possessed in their day? The best skill and science of modern intelligence has been unable to improve on the lines of these ruined canals. The selection of the location from which the water was taken from the rivers exhibit the greatest intelligence and judgment. It was these ancient ruins that gave the idea in the early 70's to the few hardy settlers then in the Territory of reclaiming the valleys where now exist a large and prosperous population. The first canal simply followed the line of the prehistoric ones.

Judging from the extension of the ancient irrigation system, the Salt River Valley at one time must have supported a population of more than 500,000 people, who irrigated and

J. E. Sturgeon, Fred Tait, Walter Talbot, G. E. Tompkins, Howard L. Underhill, H. G. Van Fossen, A. P. Walbridge, W. H. Wallace, Henry M. Ware, J. C. Wasson, Sam F. Webb, E. W. Wilbur, W. A. Wilson, but others may become members of said association by subscribing to these articles of incorporation, or a copy thereof, or by the transfer of stock to them in the regular course of the administration of the affairs of the association.

ARTICLE III.

The principal place of transacting the business of the association shall be at the city of Phoenix, in the county of Maricopa, in the Territory of Arizona.

ARTICLE IV.

Section 1. The objects for which the association is organized and the general nature of the business to be transacted by it shall be and are:

To provide for and distribute and furnish to the lands of the holders of shares of said association to which said shares and the rights and interests represented thereby are appurtenant an adequate supply of water for the irrigation of said lands.

To divert water within the Territory of Arizona from the public sources of water supply, to impound water and develop sources of water, to pump water from underground sources, to carry and distribute water for the irrigation of the lands aforesaid, and to construct, purchase, lease, condemn, or otherwise in any way whatsoever acquire and own, hold, have, use, control, maintain, preserve, manage, operate, and conduct the means therefor and any and all rights, reservoirs, dams, canals, ditches, flumes, head gates, pipes, machinery, wells, pumps, pumping plants, power houses, transmission lines, and property, both real and personal,

of every nature and kind whatsoever necessary or appropriate for the accomplishment of any of the objects or purposes aforesaid.

To divert, impound, develop, pump, distribute, deliver, and use water for all beneficial uses and purposes from surface and subterranean sources by any means adapted to any of the purposes aforesaid, and create, transmit, and use power for the accomplishment of any of the purposes or objects of the association as hereinbefore set forth.

To have and exercise all the powers, and do all and everything necessary, suitable, convenient, or proper for the accomplishment of any of the purposes or the attainment of any one or more of the objects herein enumerated or incidental to the powers herein named or which shall at any time appear conducive or expedient for the protection or benefit of the association or its members as shareholders therein.

Sec. 2. For the accomplishment or to aid in and promote the accomplishment of the aforesaid purposes or objects, or any of them, this association shall have power to enter into any contract or other arrangement or undertake in whatsoever manner and by whatsoever means may be deemed proper or convenient therefor, to secure action by or the aid of the United States Government in the construction, erection, or acquisition of any dams, reservoirs, canals, wells, or other works or property or appurtenances necessary thereunto for the storage, development, diversion, distribution, or delivery of water to the lands of the shareholders of this association, or to aid therein, and to enter into any agreement with said Government which may be approved by the Secretary of the Interior or any duly authorized official or representative of the Interior

Department with reference to the collection and payment to the Government of any and all moneys which may be due the Government under or by reason of rights issued by the Government to members of this association for the use of water from any reservoir or irrigation works acquired or constructed by said Government, or in the acquisition or construction of which it may have aided, and to comply with any conditions, rules, or regulations prescribed by Congress or by any Executive Department or official of said Government lawfully authorized thereunto, concerning the storage, diversion, delivery, application, or use of any water so stored, developed, or delivered to the shareholders of this association from or by means of any works constructed or acquired by the Government or in the construction or acquisition of which the Government may have aided, or which it may hereafter construct or acquire, or in the construction or acquisition of which it may hereafter aid.

Sec. 3. The territory within which are the lands to be irrigated as aforesaid shall be known as the Salt River Reservoir District, and shall include lands within the boundaries described as follows, that is to say: Commencing at a point on the right bank of Salt River at the mouth of the Verde River; thence in a southerly direction to the head gates of the Arizona Canal; thence in a general westerly direction along the north line of the right of way of the Arizona Canal to the end thereof, at or near the quarter corner between sections 5 and 6, township 3 north, range 1 east; thence west to the left bank of the Agua Fria River; thence in a southerly direction along the left bank of the Agua Fria River to a point in section 14, township 1 north, range 1 west, where the line of the St. Johns Canal intersects the Agua Fria River; thence

in a southeasterly direction along the north line of the right of way of the St Johns Canal to the north bank of the Salt River; thence across the Salt River to a point in section 35, township 1 north, range 1 east, where the east line of the Gila River Indian Reservation intersects the south bank of the Salt River; thence in a southerly direction along the east line of the said Gila River Indian Reservation to the township line between townships 1 and 2 south; thence following the boundary of the said Gila River Indian Reservation, east along the said township line to the range line between ranges 4 and 5 east; thence south between ranges 4 and 5 east; thence east, between townships 2 and 3 south, to the east line of the right of way of the east branch of the Consolidated Canal; thence north, following the east line of the right of way of the east branch of the Consolidated Canal to the south line of section 2, township 2 south, range 5 east; thence east to the section corner common to sections 5, 6, 7, and 8, township 2 south, range 6 east, to the east bank of the Highland Canal; thence in a general northerly direction along the east bank of said Highland Canal to the left bank of Salt River; thence in a general northerly direction along the left bank of Salt River to a point opposite the mouth of the Verde River to the place of beginning; together with any public or other lands on which rights to the use of water from reservoir or irrigation works referred to in section 2 of this article shall be issued by the Secretary of the Interior.

ARTICLE V.

Section 1. The capital stock of the association shall be $3,750,000, and be divided into 250,000 shares of the par value of $15. per share.

Section 2. Those and those only who are owners of lands

or occupants of public lands having initiated a right to acquire the same, within the territory described in Arcticle IV of these articles of incorporation, or within such extensions thereof as may be hereafter made from time to time under the powers herein conferred for that purpose, shall be the holders or owners of the capital stock of this association. For each acre of such lands shareholders may become the owner of one share of stock of this association and no more.

Sec. 3. As a condition of continued ownership of said shares of stock, and participation in any of the benefits thereof, each subscriber therefor, or transferee thereof in case of transfer, shall, as soon as the right or rights hereinafter referred to become subject to application and acquisition under the rules and regulations prescribed or to be prescribed for the purpose by Congress or any Executive Department of the Government, apply for, and in good faith comply promptly with all such rules and regulations for the acquisition of, a right to the use of water from any source of supply provided by the Government, or in the provision of which the Government has aided, for the irrigation of the lands to which said shares and rights represented thereby are appurtenant. Upon the failure of the subscriber, or holder otherwise, of any of the shares of the capital stock of this association to apply for such rights, or, having applied therefor, upon failure to promptly and in good faith comply with all rules and regulations prescribed or that may be prescribed by Congress or by any Executive Department of the Government relative thereto, then he shall forfeit to the association such shares of stock and all and every right in anywise theretofore or then incident thereto, or that might in any-

wise arise or accrue from or exist by virtue of such subscription or ownership, or that could by any means arise or be claimed therefrom, and such person, his heirs and assigns, shall thereafter have no right whatsoever as a member of this association by virtue thereof.

Sec. 4. Any shares of stock so forfeited shall at once be canceled and shall not again, under any circumstances, be renewed, revived, or reissued. Other stock in lieu thereof up to the limit of the total number of shares authorized by these articles may be subscribed for and issued, subject to all the conditions of these articles and to the approval of the Secretary of the Interior.

Sec. 5. The ownership of each share of stock of this association shall carry, as incident thereto, a right to have delivered to the owner thereof water, by the association, for the irrigation of the lands to which such share is appurtenant.

Sec. 6. The amount of water so to be delivered to such owner shall be that proportionate part of all stored and developed water, the storage or development of which is or may be effected by this association, or by means of works under its control, management, or direction, or which may become available for distribution by this association from irrigation works built by the National Government, during any irrigating season, as the number of shares owned by him shall bear to the whole number of valid and subsisting shares of the association issued and then outstanding, to be delivered to an upon said lands at such times during such season as he may direct.

Sec. 7. And there shall also be incident to such ownership of such shares the right to have delivered to the owner thereof, for the irrigation of said lands, as the association shall from time to time acquire means for that purpose, the water heretofore, and

before the shareholder or his transferee became a member of this association, appropriated by him or by his predecessors in interest, for the irrigation of said lands: Provided, however, that the whole amount of water actually delivered from all sources shall not exceed the amount necessary for the proper cultivation of said lands.

Sec. 8. The records of the association and each and every certificate or other evidence of ownership of shares of stock in the association, when issued, shall contain a description of the lands to be irrigated, and to which the aforesaid rights and shares shall be perpetually appurtenant, and thereafter all rights, whatever their source or whatever their manner of acquisition, to the use of water for the irrigation of said lands, shall forever be inseparably appurtenant to said lands, together with the said shares of stock, and all rights and interests represented thereby or existing or accruing by reason thereof, unless such rights shall become forfeited under the provisions of these articles of incorporation, or of by-laws adopted in pursuance thereof, or by operation of law, or by the voluntary abandonment thereof by deed, grant, or other instrument, or by nonuser for the term prescribed by law; but no such abandonment shall be for the benefit of any person designated by such shareholder, directly or indirectly, or to his use, nor confer any right whatsoever upon the holder of any grant, release, waiver, or declaration of abandonment of whatever kind of such right: Provided, however, that if for any reason it should at any time become impracticable to beneficially use water for the irrigation of the land to which the right to the use of same is appurtenant on the said land, the said right may be

severed from said land and simultaneously transferred and attached to other lands to which shares of stock in this association are or are thereby made appurtenant, if a petition for leave to make such transfer and showing the necessity thereofor shall have first been approved by a two-thirds vote of the board of governors at a regular meeting and by the Secretary of the Interior; and all the provisions and agreements hereinbefore in this section contained shall be set forth in the aforesaid certificate or other evidence of the ownership of shares of stock in the association, and such certificate or other instrument shall be signed, executed, and acknowledged by the president and secretary of the association, and by the person to whom it is issued in the manner required by law for the execution and acknowledgment of deeds for the conveyance of real estate, and the council shall pass by-laws prescribing the form of such certificate or other instrument not inconsistent with these articles.

Sec. 9. Every transfer of the title to any lands to which the said rights and stock are so appurtenant, whether by grant or by operation of law (except where the land may be subjected by grant or involuntarily under any law to an easement, the exercise of which does not interfere with the cultivation of the soil by the servient owner) shall operate, whether it be so expressed in the grant or other means of transfer or not, as a transfer of all rights to the use of water for the irrigation of said lands, and all rights arising from, or incident to, the ownership of such stock, and as well as the stock itself, to the grantee or successor in title of said lands; and upon presentation to this association of proof of any such transfer of land, to which such rights are

Appurtenant, the proper officer shall transfer such stock upon its books to the successor in title to said lands.

Sec. 10. Any transfer, or attempted transfer, of any of the shares of stock of this association, made or suffered by the owner thereof, unless simultaneously a transfer of the land to which it is appurtenant is made or suffered, shall be of no force or effect whatsoever for any purpose, and shall confer no rights of any kind whatsoever on the person or persons to whom such transfer may have been attempted to be made.

Sec. 11. No payments for the capital stock of this association shall be required except in the manner following: Whenever it shall be announced or otherwise made known by the Government, or any of its proper agencies, to the subscribers to the shares of said capital stock that rights may be initiated to the use of water from any works acquired or constructed by it for the storage or development of water capable of being used on the lands of the subscribers for said shares of stock, or in the acquisition or construction of which works the Government shall have aided, then the said subscribers shall, under the rules and regulations prescribed by the Government therefor, within a reasonable time, apply to the proper agency for such rights at the rate of one acre for each share of stock so subscribed for, and upon proper proof to this association that such rights have been allotted to the subscriber and that he has complied with the Government rules and regulations up to that time, so as to entitle him to complete him ultimate acquisition thereof, then such subscriber shall be deemed to have paid on his subscription of said stock the amount that he shall have then paid to or for the use of the Government for such right,

and when all subsequent payments required by the Government for such rights shall have been paid by him, or by anyone for him, then such stock shall be deemed and held to have been fully paid up.

Sec. 12. If it should be determined by the Government that the amount of water that may safely be estimated to be capable of being stored, or developed by works acquired or constructed or to be acquired or constructed by it, or by this association, in addition to the amount of water now appropriated out of Salt River and Verde River, for the irrigation of lands in said reservoir district, shall together be insufficient to properly irrigate 250,000 acres of land, then the number of shares of the capital stock of this association shall be reduced so that the number of such shares shall not exceed the number of acres estimated by the Government to be capable of irrigation from such combined sources of supply.

Sec. 13. If at the time of the determination by the Government of the number of acres capable of such irrigation there shall have been subscribed for a number of the shares equal to the number of acres so estimated to be capable of irrigation, then no subscription for more shares shall be taken. If the number so subscribed for, however, shall then exceed the estimated number of acres so capable of irrigation, then there shall be allotted to said subscribers that number of shares equal to the estimated number of acres capable of irrigation. In such allotment cultivated lands shall have the preference; and any excess in the number of shares subscribed for over the number so allotted shall be canceled, and thereafter shall not be issued.

Sec. 14. In exercising the right of preference to allotment of shares, provided for in the foregoing section, the by-laws

cultivated some two or three hundred thousand acres of land. What has been done in the past may be accomplished again.

It is impossible, of course, to ascertain with any degree of certainty whether our pre-historic brothers had at their command greater quantities of water than we possess. We know the sources of water were the same then as now, but whether the precipitation was greater is a question impossible of demonostration. There seems to be no satisfactory evidence of the existence of pre-historic reservoirs.

The probabilities are that they had no more water than we now possess, but that they exercised greater skill and judgment in its use. It is highly probable too, that while the estimates of the best judges are correct as to the vast population existing in the valley, they are wrong as to the amount of land cultivated. A very small patch of ground is sufficient, if properly cultivated, for the maintainence of a family, and as there are no evidences of the accummulation of vast herds and flocks, and as there could not have been an extensive commerce with other nations, it is unreasonable to suppose that more land was cultivated than would be required to produce the necessary subsistence. Probably 200,000 acres would more than supply their necessities.

However, the solution of this problem is not so important as satisfactory answers to two questions that more directly concern us, viz:

QUERIES.

1. How may we increase our present water supply?

may prescribe reasonable times within which such preference shall be declared and the manner thereof.

Article VI

Section 1. The exercise of the corporate powers of this association and the management of its affairs shall be vested in--

(1) A council;

(2) A board of governors;

(3) One or more local boards of water commissioners, and

(4) A president, vice-president, treasurer, secretary, and such other officers and agents as shall or may be, from time to time, created and established by the council.

Sec. 2. The council shall consist of 30 members, who shall hold their offices for three years. In the event of a vacancy occurring from death, resignation, ceasing to be a shareholder of this association, removal from the reservoir district, or other cause, the unexpired term shall be filled at the annual election next after the vacancy shall have occurred. Shareholders of this association only shall be eligible to the office of member of the council.

Sec. 3. The annual election of the members of the council and of the other officers for whose election these articles provide shall be held on the first Tuesday of April in each year.

Sec. 4. For the purpose of electing members of the council the territory described in Article IV of these articles shall be divided by the council into ten districts, which districts shall severally consist of contiguous territory, and be as nearly uniform in shape and contain as nearly an equal number of acres to which

shares of stock in this association are appurtenant, as may be practicable.

Sec. 5. At each annual election, after 1904, there shall be elected one member of the council from each of said several districts by the electors thereof. Such member shall at the time of his election be the owner of lands situated within the district for which he is elected to which shares of stock of this association are appurtenant, and shall also be a resident of the reservoir district, and if he should, during his term of office, cease to be such owner, or a resident of such reservoir district, his office shall thereupon, and by reason thereof, become vacant.

Sec. 6. At the annual election to be held on the first Tuesday of April, 1904, there shall be elected three members of the council from each of said districts, one of whom shall be elected to serve for one, one for two, and the third for three years.

Sec. 7. The term of office of members of the council shall begin on the first Monday in May following their election.

Sec. 8. Until the election of members of the council at the annual election in 1904, and until their qualification, the council shall consist of the following-named persons, that is to say: J. Wilfred Broomell, Vernon L. Clark, O. H. Christy, W. W. Dobson, B. A. Fickas, S. S. Green, C. R. Hakes, C. T. Hirst, P. T. Hurley, James Johnson, Emery Kays, W. J. Kingsbury, Wallace A. MacDonald, H. C. Mann, M. W. Messinger, Thomas W. Pemberton, Alfred J. Peters, J. E. Price, L. J. Rice, L. D. Rousseau, C. S. Steward, J. A. Stewart, J. E. Sturgeon, Fred Tait, G. W. Tompkins, Howard L. Underhill, H. G. Van Fossen, A. P. Wallbridge, Henry E. Ware, W. A. Wilson.

water from any reservoir or other works acquired or constructed by the National Government, or in the acquisition or construction of which it shall have aided, and which may be used for supplying water to the lands of the shareholders of this association.

Sec. 14. No by-laws shall be passed or enforced which shall interfere with or affect any present existing vested right of any member of this association to the use of water for irrigation.

Sec. 15. All by-laws shall be of general application so far as general laws can be made to apply.

Article Vll.

Section 1. At all elections the electors shall possess the following qualifications:

(1) Shall be at the time of the election the owner of at least one share of the capital stock of this association, and shall have been the owner thereof, as shown by the books of the association, for at least twenty days before such election.

(2) Shall be of the age of 21 years or more and of sound mind.

Sec. 2. At all elections each shareholder shall be entitled to one vote for each share of stock owned by him, not, however, to exceed in the aggregate 160 votes, and no more.

Sec. 3. The votes shall be by written or printed ballot and be voted only by the electors at the polls in person.

Sec. 4. The council may make reasonable by-laws for the registration of voters and the method of holding elections.

Sec. 5. At all elections the person receiving the highest number of votes for any office shall be deemed elected to such office.

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Article VIII.

Section 1. The board of governors shall consist of the president, by virtue of his office, and ten other members. Each of said ten members shall be the owner of lands situated within the district for which he is elected, to which shares of stock of this association are appurtenant, and shall also be a resident of the reservoir district; and if he should, during his term of office, cease to be such owner or a resident of such reservoir district, his office shall thereupon, and by reason thereof, become vacant.

Sec. 2. One member of said board shall be elected at the annual election to be held on the first Tuesday of April, 1904, and at each annual election thereafter from and by the electors of each of the districts into which the territory described in Article IV of these articles is or may be divided for the purpose of the election of members of the council.

Sec. 3. Until the election of members of the board of governors at the annual election in 1904, and until their qualification, the board of governors shall consist of the following-named persons, that is to say: Frank T. Alkire, A. J. Chandler, William Christy, B. A. Fowler, Lin B. Orme, F. H. Parker, H. Simkins, M. A. Stanford, W. H. Wallace, Sam F. Webb, E. W. Wilbur.

Sed. 4. If a member of the board of governors at any time during his term of office should cease to have any of the qualifications prescribed for that office, such office shall thereupon become vacant, and in the event of a vacancy from that cause or by reason of the death, removal from the reservoir district, or resignation of any member of said board of governors, the vacancy shall be filled by the council if it occurs more than sixty days prior to a regular election.

Sec. 5. The board of governors shall meet in regular session at the office of the association on the first Monday of each month, unless it be a legal holiday, in which case the board shall meet on the following day.

Sec. 6. Special meetings of the board of governors may be called by the president, or by any six of the members of the board. Such call shall be in writing and signed by either the president or any six of the members, and shall state the time of such proposed meeting and the nature of the business to be transacted thereat. Such written call shall be filed with the secretary, who shall thereupon immediately, and at least five days before the time fixed for such meeting, mail, postpaid, to the president and each member of the board a copy of such call, and shall publish the same in some newspaper published and of general circulation in the territory described in Article IV of these articles on three consecutive days before and exclusive of the day fixed for such special meeting. If the secretary fail or refuse to publish such call or to mail copies thereof, as above provided, then either the president, if he issued the call, or any one of the members who issued the same, may make publication and mail copies of the call, with like effect as if done by the secretary. Special meetings of the board of governors shall be held at the office of the association.

Sec. 7. The members of the board of governors shall receive such compensation as shall be prescribed by the council by by-laws.

Sec. 8. The board of governors shall have the administration of the corporate affairs and business of the association, and shall manage and conduct the same subject to all the provisions of these articles and of the by-laws.

Sec. 9. It shall have the power to appoint, subject to removal by it at any time, a general superintendent, and prescribe his duties and powers, subject to all rules and regulations prescribed by the by-laws, and to employ an engineer or engineers and such other employees as may be proper and necessary to effect the purposes of this association, subject to such rules and regulations as may be prescribed by the by-laws.

Sec. 10. It shall have the power to prosecute, defend, and compromise all lawsuits; to make all contracts, in the name of the association, necessary and proper for the conduct of the affairs and the carrying on of the business of the association, subject to all limitations and regulations prescribed by these articles or the by-laws.

Sec. 11. It shall have the power to estimate, make, and levy all assessments against the shareholders of this association to the extent and in the manner authorized by these articles and regulated and prescribed by the by-laws.

Sec. 12. It shall have the power to make, publish, and enforce rules and regulations concerning the distribution, use, and application of water for irrigation, subject at all times to and not inconsistent with these articles or with the by-laws or with any rules or regulations established by the Secretary of the Interior or other agency of the National Government.

Sec. 13. It shall keep, or cause to be kept, a record of its transactions, which shall at all times remain in the office of the association, and shall, during office hours, be open to the inspection of the shareholders or their properly authorized agents.

Sec. 14. It shall hear and determine complaints of shareholders of nonservice or of improper service or distribution of

water or of improper performance of duty by any employee of the association relative to the distribution of water.

Article IX

Section 1. The lands under each separate distributing canal system within the territory described in Article IV of these articles shall on the petition of the owners of two-thirds of the shares of capital stock of this association appurtenant to the lands in such proposed canal division be formed into a canal division, and the boundaries of such division be fixed by the council. On the petition of the holders of a majority of the shares in this association owning the lands affected thereby, or without such petition, whenever in the judgment of the council it will be beneficial, the council may change or modify the boundaries of any canal division.

Sec. 2. A board of water commissioners, to consist of three members, shall be appointed annually by the board of governors for each canal division. Such appointment shall be made in the month of May in each year, and no one shall be eligible for such office unless he be a resident within the canal division for which he may be appointed, and a qualified elector as provided in these articles. The term of office of the members of the boards of water commissioners shall be from the time of their appointment until the first day of May in the following year, and until their successors shall have been appointed and have qualified, and they may be removed for cause by the board of governors, who may fill any vacancy in any board of water commissioners for the next unexpired term.

Sec. 3. If a petition signed by shareholders in this association, constituting a majority of qualified electors, resid-

ing in any canal division, shall be presented to the board of governors at their first meeting, in May, naming three persons eligible for appointment as water commissioners, in said canal division, and asking for their appointment to such office, such persons shall be appointed as such water commissioners.

Sec. 4. In each canal division the board of water commissioners thereof shall have the control and management of the local affairs of the canal system therein, and of the distribution of water therefrom, subject to the provisions of these articles, and to the by-laws, and to the rules and regulations established by the council, or by the Secretary of the Interior, or any agency of the National Government.

Sec. 5. The board of water commissioners in each canal division may appoint a secretary of the board and employ a division superintendent, removable at their pleasure.

Sec. 6. The board of water commissioners may call a meeting at any time of all the landowners in their canal division who are shareholders in this association, to consider and determine whether an assessment or assessments for their special benefit should be levied on the shareholders in said division. At least ten days' notice of such meeting shall be given by the secretary of said board, by posting a notice thereof in three public places in said canal division, and mailing a copy of such notice, with postage prepaid, to each shareholder residing in said canal division.

Sec. 7. If a majority of such shareholders who are the holders of a majority of the shares of this association appurtenant to lands in said canal division shall at said meeting approve the levy of such special assessment or assessments and sign a petition

to the board of governors that the same be levied on the shareholders in this association, owning lands in said division, and specifying the amount of said proposed assessment and the purpose for which it should be levied, and said board of water commissioners should recommend it in writing, indorsed on said petition, it shall be the duty of the board of governors to levy said special assessment on all the shareholders in this association owning lands in said canal division.

Sec. 8. When so levied the said assessment may when collected be disbursed by the board of water commissioners of said canal division for the purpose specified in its levy, and shall be paid out by the treasurer on warrants drawn on him by the said board of water commissioners; Provided, however, that nothing in this article shall limit or abridge the right of the association to make, levy, and collect assessments, as elsewhere in these articles provided.

Article X.

Section 1. A president and a vice-president of the association shall be elected at the annual election to be held on the first Tuesday of April, 1904, and every two years, thereafter, and shall serve two years from and after the first Monday of May following their election and until their successors are elected and qualified. Until the election of a president and vice-president, as above provided, B. A. Fowler shall be the president and E. W. Wilbur shall be the vice-president of this association.

Sec. 2. A treasurer and a secretary of the association shall be appointed by the board of governors at its first regular meeting in each year, and shall serve for one year thereafter and

2. How may we best husband the surplus waters so as to make them available during seasons of scarcity?

Disguise the fact as we may, it is nevertheless true that we have reached a period of stagnation in local agricultural progress. We can go no farther forward under present conditions. Neither can we stand still, for while we may be satisfied to let present conditions alone, believing, as is undoubtedly true, that our beautiful valley even in its misfortunes is better than the fortunes of other localities; yet, we cannot forever keep this valley to ourselves. There are others who are willing to share our misfortunes, and they have as much right to live here as we have, and every acre of new land that is cultivated but reduces the amount of water available for the older farms.

Stagnation, then, means annihilation. A languid interest in this most important subject means industrial consumption.

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FACTS.

These facts stare at us and will not down:

1. That the present water supply is entirely inadequate to present demands.

2. That we have reached and exceeded the maximum acreage that can be irrigated under existing conditions.

3. That all the available water in the streams and lakes has been utilized.

4. That every year brings an increased population with whom the present supply of water must be shared.

until their successors have been appointed and have qualified.

Sec. 3. The treasurer and secretary shall give such bond as may be prescribed by the by-laws; provided that no member of the board of governors nor the secretary shall be accepted as a surety on the bond of the treasurer.

Sec. 4. The president, vice-president, treasurer, and secretary shall perform such duties as are prescribed by these articles and by the by-laws, wherein such by-laws shall not be inconsistent with law or with these articles, and shall receive such compensation as may be fixed by the by-laws, which compensation shall be neither increased nor diminished during their respective terms of office.

Sec. 5. In case of the absence, illness, or inability of the president to act from any cause, or in case of a vacancy in that office, the vice-president shall act in the place and stead of the president. In the event of a vacancy in the offices of both the president and vice-president, the council shall call a special election to fill the unexpired terms for both offices; provided, however, that such vacancies, if occuring within sixty days before the next annual election, shall be filled by appointment by the council.

Sec. 6. The president shall be the chief executive officer of the association, and shall have general supervision over all other officers of the association in the performance of their duties as such, and of the conduct of the business and affairs of the association. He shall preside at all meetings of the board of governors and shall be ex officio a member of that board, and perform such other duties as may be devolved upon him by the by-laws.

Sec. 7. All certificates or other evidences of the ownership of shares of stock in the association issued by the association shall be signed by the president and secretary of the association and shall have the seal of the association affixed thereto.

Sec. 8. All contracts and instruments in writing executed for and in behalf of the association shall be so executed in the name of the association by the president and secretary, and shall have the seal of the association affixed thereto.

Sec. 9. The treasurer shall receive and be the custodian of all moneys and other funds of the association. No moneys shall be paid out by the treasurer unless upon warrants drawn on him by the president and secretary, except as provided in Article IX, section 8, of these articles. No warrants shall be drawn on the treasurer by the president and secretary except upon the order of the board of governors, recorded in the minutes of the board, and in a warrant record to be kept by the secretary.

Sec. 10. The treasurer shall keep a full, complete, and accurate account of all moneys of the association received and disbursed by him, in books belonging to the association, and shall present a report and account thereof for the last preceding month to the board of governors at every regular monthly meeting of said board, shall, at the expiration of each quarter, prepare and publish, in such manner as the by-laws may prescribe, a quarterly statement to shareholders showing all such receipts and disbursements during the last preceding quarter; and the treasurer shall perform such other duties as may be devolved upon him by the by-laws.

Sec. 11. The secretary shall act as the clerk of the

board of governors, and keep a record of all their proceedings. He shall be the custodian of the seal of the association, and of all its books, papers, and records. He shall immediately upon their adoption and certification to him by the council, record in a book of by-laws to be kept by him in his office, all by-laws adopted by the council, and shall keep such book open to the inspection of any member of the association at all time during business hours. And the secretary shall perform such other duties as may be devolved upon him by the by-laws.

Article Xl.

The council may create such other offices as may be necessary for the carrying on of the business and affairs of this association, and prescribe the manner of appointment, powers, duties, terms of office, eligibility, and compensation thereof by by-laws not inconsistent with these articles.

Article Xll.

Upon proper complaint thereof by the board of governors, duly sustained, the council may remove from office the president, vice-president, treasurer, secretary, or the incumbent of any office created by the council, for incompetence, neglect of duty, misappropriation of funds of the association, or for violation of any of the provisions of these articles or of any by-law. The council shall prescribe by by-laws the procedure for such removal.

Article Xlll.

Section 1. Revenues necessary for the accomplishment of the purposes of this association shall be raised by an assessment thereof, from time to time as required, upon and against the shareholders.

Sec. 2. The council shall have power to make and enforce necessary by-laws for the making, levying, collecting, and enforcing of such assessments.

Sec. 3. Assessments for the ordinary cost of operation, maintenance, and repair of the works of the association, or of those the maintenance and control of which are, or may be hereafter, lodged in the association, shall be equally assessed against all the shareholders in proportion to the number of shares held by them, respectively.

Sec. 4. Assessments for the purpose of constructing or acquiring, or for the betterment, improvement, renewal, replacement, or preservation of any works, property, or rights of the association, or for the purpose of preserving, or increasing, or more efficiently or economically distributing the water supplies available for distribution by the association, or for the fulfillment of any obligation undertaken by the association in any contract, agreement, or other arrangement with the United States Government, or necessary for the accomplishment or carrying out of any of the purposes of the association, may be equally assessed against all the shareholders in proportion to the number of shares owned by them, respectively.

Sec. 5. Assessments for expenditures for purposes that are of benefit to a part only of the shareholders may be specially assessed in proportion to such benefits against such shareholders, but no expenditure to be provided for or covered by such special assessment shall be made, or obligation to expend the same incurred, except upon the petition of the holders of two-thirds of the shares to be so specially benefited thereby.

Sec. 6. Assessments shall become, from time to time as they are made and levied, and until they are paid or otherwise discharged shall be and remain a lien on the lands of the shareholder against which they are levied and upon the shares of stock appurtenant to said lands and all rights and interests represented by such shares. The manner of fixing the lien and enforcing the same shall be prescribed in the by-laws.

Sec. 7. Except for the ordinary operation, maintenance, and repair, no work shall be undertaken, purchase made or indebtedness incurred or be authorized during any one year whereof the cost or amount thereof shall exceed $50,000 until it shall have first been ratified by at least two-thirds of the votes cast at an election to be called for that purpose. Special elections may be called and held for such purpose under such by-laws as the council may prescribe not inconsistent with these articles.

Article XIV.

Nothing in these articles of incorporation, or in the fact of becoming a member of this association, shall be construed as affecting, or intended to affect, or in anyway interfere with the present vested rights of any person to the prior use or delivery of the natural appropriated flow of the waters of the Salt and Verde rivers.

Article XV.

The individual property of the shareholders shall be exempt from liability for incorporate indebtedness of this association.

Article XVI.

The incorporate indebtedness shall not exceed two-thirds of the amount of the capital stock.

Article XVll.

This corporation shall endure for the term of twenty-five years.

Article XVlll.

These articles of incorporation can only be amended by the shareholders at a regular annual election or at a special election called for that purpose. No proposed amendment shall be submitted to the shareholders until it shall have first received the approval of two-thirds of the members of the council at a regular or duly called session thereof, nor shall any such proposed amendment be so submitted until it shall have been published in full at least once in each week for four consecutive weeks in at least three newspapers published and of general circulation within the territory described in Article lV of these articles, the last of which such publications shall be not less than ten nor more than twenty days before any such election.

Article XlX.

This association may accept and avail itself of, or subject itself to, the provisions of any law or laws enacted or that may be enacted by Congress or the legislative assembly of the Territory or State, when it becomes a State, of Arizona, relative to corporations which may be applicable to corporations organized for like purposes as this association. Such acceptance or subjection shall be valid when ratified by at least two-thirds of the votes cast at any annual election, or at any special election called for the ratification thereof.

Article XX.

The seal of this association shall be a figure of two concentric circles, the outer being 2 inches and the inner 1½ inches in diameter. In the space between the two shall be the words "Salt River Vally Water Users' Association," and bearing within the center space an unrolled scroll with the words and figures thereon, "Incorporated, 1903, Arizona."

Witness our hands hereto this 4th day of February, A. D. 1903.

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There was an active minority in this committee from which came much opposition, there being seven principal points of objection advanced, namely,

First, a reluctance to abandon old and adopt new methods.

Second, an unwillingness to accept the principle laid down in the National irrigation act itself that water should be appurtenant to the land.

Third, to a fear of jeopardizing the capital invested in the so-called "floating water rights" which, it was feared would become valueless if the water was attached to the land.

Fourth, to the unwillingness on the part of large holdings to subdivide as required by the reclamation act, yet wanting to become beneficiaries under it.

Fifth, to a fear of a merger of the canal systems into one association and consequent loss of local control.

Sixth, to ignorance of the plan proposed and the benefits expected.

Seventh, to pure selfishness and varying personal interests.

Naturally there was intense discussion over the objects of the association -the power to be given the administration- the size of the reservoir district -the amount of capital stock- by whom it should be held -how acquired- how canceled and the rights incident thereto -the appurtenancy to the land- the revenue, how raised -the expenditures, how controlled, etc., etc.-

However the articles of incorporation were completed in February, 1903, and were approved and adopted by a majority of the members of the executive committee and then submitted to the general water storage conference committee and by them adopted and approved.

ARTICLES OF INCORPORATION.

KNOW ALL MEN BY THESE ARTICLES OF INCORPORATION:

That we, the undersigned, have associated ourselves together under the laws of the Territory of Arizona as a body corporate.

ARTICLE 1.

The name of the corporation shall be and is Salt River Valley Water Users' Association.

ARTICLE 11.

The names of the incorporators are: Frank T. Alkire, E. J. Bennitt, J. Wilfred Broomell, A. J. Chandler, Vernon L. Clark, O. H. Christy, Wm. Christy, W. W. Dobson, W. S. Dorman, B. A. Fickas, B. A. Fowler, S. S. Green, C. R. Hakes, Jas. G. Hammels, C. T. Hirst, H. A. Hughes, C. C. Hurley, P. T. Hurley, James Johnson, Emery Kays, W. J. Kingsbury, Wallace A. MacDonald, H. C. Mann, M. W. Messinger,

Lin B. Orme, F. H. Parker, Thos. W. Pemberton, Alfred J. Peters, J. E. Price, L. J. Price, L. D. Rosseau, H. Simkins, M. A. Stanford, C. S. Steward, J. A. Stewart, S. S. Stout, J. E. Sturgeon, Fred Tait, Walter Talbot, C. E. Tompkins, Howard L. Underhill, H. G. Van Fossen, A. P. Walbridge, W. H. Wallace, Henry E. Ware, J. C. Wasson, Sam F. Webb, E. W. Wilbur, W. A. Wilson, but others may become members of said association by subscribing to these Articles of Incorporation, or a copy thereof, or by the transfer of stock to them in the regular course of the administration of the affairs of the Association.

ARTICLE III.

The principal place of transacting the business of the Association shall be at the City of Phoenix, in the County of Maricopa, in the Territory of Arizona.

ARTICLE IV.

Section 1. The objects for which the Association is organized and the general nature of the business to be transacted by it shall be and are:

To provide for and distribute and furnish to the lands of the holders of shares of said Association to which said shares and the rights and interests represented thereby are appurtenant, an adequate supply of water for the irrigation of said lands;

To divert water within the Territory of Arizona from the public sources of water supply, to impound water and develop sources of water, to pump water from underground sources, to carry and distribute water for the irrigation of the lands aforesaid, and to construct, purchase, lease, condemn or otherwise in any way whatsoever acquire and own, hold, have, use, control, maintain, preserve, manage, operate and conduct the means therefor and any and all rights, reser-

voirs, dams, canals, ditches, flumes, headgates, pipes machinery, wells, pumps, pumping plants, power houses, transmission lines, and property both real and personal of every nature and kind whatsoever necessary or appropriate for the accomplishment of any of the objects or purposes aforesaid;

To divert, impound, develop, pump, distribute, deliver and use water for all beneficial uses and purposes from surface and subterranean sources by any means adapted to any of the purposes aforesaid, and create, transmit and use power for the accomplishment of any of the purposes or objects of the Association as hereinbefore set forth;

To have and exercise all the powers, and do all and everything necessary, suitable, convenient or proper for the accomplishment of any of the purposes, or the attainment of any one or more of the objects herein enumerated, or incidental to the powers herein named, or which shall at any time appear conducive or expedient for the protection or benefit of the Association or its members as shareholders therein.

Sec. 2. For the accomplishment, or to aid in and promote the accomplishment, of the aforesaid purposes or objects, or any of them, this Association shall have power to enter into any contract or other arrangement, or undertake in whatsoever manner and by whatsoever means may be deemed proper or convenient therefor, to secure action by or the aid of the United States Government in the construction, erection or acquisition of any dams, reservoirs, canals, wells, or other works or property, or appurtenances necessary thereunto, for the storage, development, diversion, distribution or delivery of water to the lands of the shareholders of this

5. That each year the situation must grow worse until we are in the same condition as our Pima neighbors, who are now starving where once they reveled in plenty.

These facts are distressing, but true. There is no use in dodging them; they must be met and fought to a finish.

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HOW TO INCREASE THE WATER SUPPLY.

Now, in answer to the first question at the beginning of this section, viz: How may we increase our water supply? we have two solutions:

1. By the creation and protection of forest reserves in our vast drainage districts. It is the supposition that the more trees and vegetation in a given district, the greater the precipitation. When our watersheds are denuded of their forests and perennial grasses, and miles upon miles of barren waste and unshaded rocks are left exposed to the direct rays of a tropical sun, not only are they deprived of that which invites and coaxes the rain from the heavens, but the bare ground presents a most excellent radiating surface which transforms the surrounding atmosphere into a dry, hot blanket, so that when currents of saturated air are wafted from the ocean there are no cool breezes to meet and wring from them their blessings.

The accummulation of humus on the forest floor - the litter of twigs and dry leaves, the carpets of moss and lichen, the grasses and larger undergrowth - all tend to retard the flow of rain and melting snows and to assist percolation.

Association, or to aid therein, and to enter into any agreement with said Government which may be approved by the Secretary of the Interior or any duly authorized official or representative of the Interior Department with reference to the collection and payment to the Government of any and all moneys which may be due the Government under or by reason of rights issued by the Government to members of this Association for the use of water from any reservoir or irrigation works acquired or constructed by said Government, or in the acquisition or construction of which it may have aided, and to comply with any conditions, rules or regulations prescribed by Congress or by any executive department or official of said Government lawfully authorized thereunto, concerning the storage, diversion, delivery, application, or use of any water so stored, developed or delivered to the shareholders of this Association from or by means of any works constructed or acquired by the Government or in the construction or acquisition of which the Government may have aided, or which it may hereafter construct or acquire or in the construction or acquisition of which it may hereafter aid.

Sec. 3. The territory within which are the lands to be irrigated as aforesaid shall be known as the Salt River Reservoir District; and shall include lands within the boundaries described as follows, that is to say: Commencing at a point on the right bank of Salt river at the mouth of the Verde river; thence in a southerly direction to the headgates of the Arizona canal; thence in a general westerly direction along the north line of the right of way of the Arizona canal to the end thereof at or near the quarter corner between Sections 5 and 6, township 3 north, range 1 east; thence west to the left bank of the Agua Fria river; thence in a southerly direction along the left bank of the Agua

Fria river to a point in Section 14, Township 1 north, Range 1 west, where the line of the St. John's canal intersects the Agua Fria river; thence in a southeasterly direction along the north line of the right of way of the St. John's canal to the north bank of the Salt river; thence across the Salt river to a point in Section 35, Township 1 north, Range 1 east, where the east line of the Gila river Indian reservation intersects the south bank of the Salt river; thence in a southerly direction along the east line of the said Gila river Indian reservation to the township line between Townships 1 and 2 south; thence following the boundary of the said Gila river Indian reservation, east along the said township line to the range line between Ranges 4 and 5 east; thence south between Ranges 4 and 5 east; thence east, between Townships 2 and 3 south, to the east line of the right of way of the east branch of the Consolidated canal; thence north, following the east line of the right of way of the east branch of the Consolidated canal to the south line of Section 2, Township 2 south, Range 5 east; thence east to the section corner common to Sections 5, 6, 7 and 8, Township 2 south, Range 6 east; thence north between Sections 5 and 6 east, Township 2 south, Range 6 east, to the east bank of the Highland canal; thence in a general northerly direction along the east bank of said Highland canal to the left bank of Salt river; thence in a general northerly direction along the left bank of Salt river to a point opposite the mouth of the Verde river to the place of beginning; together with any public or other lands on which rights to the use of water from reservoir or irrigation works referred to in Section 2 of this Article shall be issued by the Secretary of the Interior.

ARTICLE V.

Section 1. The capital stock of the Association shall be $3,750,000, and be divided into 250,000 shares of the par value of $15.00 per share.

Sec. 2. Those and those only who are owners of lands, or occupants of public lands having initiated a right to acquire the same, within the territory described in Article IV of these Articles of Incorporation, or within such extensions thereof as may be hereafter made from time to time under the powers herein conferred for that purpose, shall be the holders or owners of shares of the capital stock of this Association. For each acre of such lands shareholders may become the owner of one share of stock of this Association and no more.

Sec. 3. As a condition of continued ownership of said shares of stock, and participation in any of the benefits thereof, each subscriber therefor, or transferee thereof in case of transfer, shall, as soon as the right or rights hereinafter referred to become subject to application and acquisition under the rules and regulations prescribed or to be prescribed for the purpose by Congress or any executive department of the Government, apply for, and in good faith comply promptly with all such rules and regulations for the acquisition of, a right to the use of water from any source of supply provided by the Government, or in the provision of which the Government has aided, for the irrigation of the lands to which said shares and rights represented thereby are appurtenant. Upon the failure of the subscriber, or holder otherwise, of any of the shares of the capital stock of this Association to apply for such rights, or, having applied therefor, upon failure to promptly and

in good faith comply with all rules and regulations prescribed or that may be prescribed by Congress or by any executive department of the Government relative thereto, then he shall forfeit to the Association such shares of stock and all and every right in anywise theretofore or then incident thereto, or that might in anywise arise or accrue from or exist by virtue of such subscription or ownership, or that could by any means arise or be claimed therefrom, and such person, his heirs and assigns, shall thereafter have no right whatsoever as a member of this Association by virtue thereof.

Sec. 4. Any shares of stock so forfeited shall at once be cancelled and shall not again, under any circumstances, be renewed, revived, or reissued. Other stock in lieu thereof up to the limit of the total number of shares authorized by these Articles may be subscribed for, and issued, subject to all the conditions of these Articles and to the approval of the Secretary of the Interior.

Sec. 5. The ownership of each share of stock of this Association shall carry, as incident thereto, a right to have delivered to the owner thereof water, by the Association, for the irrigation of the lands to which such share is appurtenant.

Sec. 6. The amount of water so to be delivered to such owner shall be that proportionate part of all stored and developed water, the storage or development of which is or may be effected by this Association, or by means of works under its control, management or direction, or which may become available for distribution by this Association from irrigation works built by the National Government, during any irrigating season, as the number of shares owned by him shall bear to the whole number of valid and subsisting shares of the Association issued and then outstanding, to be delivered to

and upon said lands at such times during such season as he may direct.

Sec. 7. And there shall also be incident to such ownership of such shares the right to have delivered to the owner thereof, for the irrigation of said lands, as the Association shall from time to time acquire means for that purpose, the water heretofore and before the shareholder or his transferee became a member of this Association, appropriated by him or by his predecessors in interest, for the irrigation of said lands: provided, however, that the whole amount of water actually delivered from all sources shall not exceed the amount necessary for the proper cultivation of said lands.

Sec. 8. The records of the Association and each and every certificate or other evidence of ownership of shares of stock in the Association, when issued, shall contain a description of the lands to be irrigated, and to which the aforesaid rights and shares be perpetually appurtenant, and thereafter all rights, whatever their source or whatever their manner of acquisition, to the use of water for the irrigation of said lands, shall forever be inseparably appurtenant to said lands, together with the said shares of stock, and all rights and interests represented thereby or existing or accruing by reason thereof, unless such rights shall become forfeited under the provisions of these Articles of Incorporation, or of by-laws adopted in pursuance thereof, or by operation of law, or by the voluntary abandonment thereof by deed, grant or other instrument, or by non-user for the term prescribed by law; but no such abandonment shall be for the benefit of any person designated by such shareholder, directly or indirectly, or to his use, nor confer any right whatsoever upon the holder of any grant, release, waiver,

or declaration of abandonment of whatever kind of such right: provided, however, that if for any reason it should at any time become impracticable to beneficially use water for the irrigation of the land to which the right to the use of the same is appurtenant on the said land, the said right may be severed from said land and simultaneously transferred and attached to other lands to which shares of stock in this Association are or are thereby made appurtenant, if a petition for leave to make such transfer and showing the necessity therefor shall have first been approved by a two-thirds vote of the Board of Governors at a regular meeting and by the Secretary of the Interior; and all the provisions and agreements hereinbefore in this section contained shall be set forth in the aforesaid certificate or other evidence of the ownership of shares of stock in the Association, and such certificate or other instrument shall be signed, executed and acknowledged by the President and Secretary of the Association, and by the person to whom it is issued in the manner required by law for the execution and acknowledgment of deeds for the conveyance of real estate, and the Council shall pass by-laws prescribing the form of such certificate or other instrument not inconsistent with these articles.

Sec. 9. Every transfer of the title to any lands to which the said rights and stock are so appurtenant, whether by grant or by operation of law (except where the land may be subjected by grant or involuntarily under any law to an easement, the exercise of which does not interfere with the cultivation of the soil by the servient owner) shall operate, whether it be so expressed in the grant or other means of transfer or not, as a transfer of all rights to the use of water for the irrigation of said lands, and all rights

arising from, or incident to, the ownership of such stock, and as well the stock itself, to the grantee or successor in title of said lands; and upon presentation to this Association of proof of any such transfer of land, to which such rights are appurtenant, the proper officer shall transfer such stock upon its books to the successor in title to said lands.

Sec. 10. Any transfer, or attempted transfer, or any of the shares of stock of this Association, made or suffered by the owner thereof, unless simultaneously a transfer of the land to which it is appurtenant is made or suffered, shall be of no force or effect whatsoever for any purpose, and shall confer no rights of any kind whatsoever on the person or persons to whom such transfer may have been attempted to be made.

Sec. 11. No payments for the capital stock of this Association shall be required except in the manner following:

Whenever it shall be announced or otherwise made known by the Government, or any of its proper agencies, to the subscribers to the shares of said capital stock that rights may be initiated to the use of water from any works acquired or constructed by it for the storage or development of water capable of being used on the lands of the subscribers for said shares of stock, or in the acquisition or construction of which works the Government shall have aided, then the said subscribers shall, under the rules and regulations prescribed by the Government therefor, within a reasonable time, apply to the proper agency for such rights at the rate of one acre for each share of stock so subscribed for, and upon proper proof to this Association that such rights have been allotted to the subscriber and that he has complied with the Government rules and regulations up to that time, so as to entitle him to complete his ul-

timate acquisition thereof, then such subscriber shall be deemed to have paid on his subscription of said stock the amount that he shall have then paid to or for the use of the Government for such right, and when all subsequent payments required by the Government for such rights shall have been paid by him, or by anyone for him, then such stock shall be deemed and held to have been fully paid up.

Sec. 12. If it should be determined by the Government that the amount of water that may safely be estimated to be capable of being stored, or developed by works acquired or constructed or to be acquired or constructed by it, or by this Association, in addition to the amount of water now appropriated out of Salt River and Verde river, for the irrigation of lands in said reservoir district, shall together be insufficient to properly irrigate 250,000 acres of land, then the number of shares of the capital stock of this Association shall be reduced so that the number of such shares shall not exceed the number of acres estimated by the Government to be capable of irrigation from such combined sources of supply.

Sec. 13. If at the time of the determination by the Government of the number of acres capable of such irrigation, there shall have been subscribed for a number of the shares equal to the number of acres so estimated to be capable of irrigation, then no subscription for more shares shall be taken. If the number so subscribed for, however, shall then exceed the estimated number of acres so capable of irrigation, then there shall be allotted to said subscribers that number of shares equal to the estimated number of acres capable of irrigation. In such allotment, cultivated lands shall have the preference; and any excess in the number of shares subscribed for over the number so allotted, shall be cancelled, and thereafter shall not be issued.

Sec. 14. In exercising the right of preference to allotment of shares, provided for in the foregoing section, the by-laws may prescribe reasonable times within which such preference shall be declared and the manner thereof.

ARTICLE Vl.

Section 1. The exercise of the corporate powers of this Association and the management of its affairs shall be vested in

1. A Council,

2. A Board of Governors.

3. One or more local boards of Water Commissioners, and

4. A President, Vice-President, Treasurer, Secretary, and such other officers and agents as shall or may be, from time to time, created and established by the Council.

Sec. 2. The Council shall consist of thirty members, who shall hold their offices for three years. In the event of a vacancy occurring from death, resignation ceasing to be a shareholder of this Association, removal from the Reservoir District, or other cause, the unexpired term shall be filled at the annual election next after the vacancy shall have occurred. Shareholders of this Association only shall be eligible to the office of member of the Council.

Sec. 3. The annual election of the members of the Council, and of the other officers for whose election these Articles provide, shall be held on the first Tuesday of April in each year.

Sec. 4. For the purpose of electing members of the Council the territory described in Article lV of these Articles, shall be divided by the Council into ten (10) districts, which districts shall severally consist of contiguous territory, and be as nearly uniform in shape, and contain as nearly an equal number of acres to

which shares of stock of this Association are appurtenant, as may be practicable.

Sec. 5. At each annual election, after 1904, there shall be elected one member of the Council from each of said several districts by the electors thereof. Such member shall at the time of his election be the owner of lands situated within the district for which he is elected to which shares of stock of this Association are appurtenant, and shall also be a resident of the Reservoir District, and if he should, during his term of office, case to be such owner, or a resident of such Reservoir District, his office shall thereupon and by reason thereof, become vacant.

Sec. 6. At the annual election, to be held on the first Tuesday of April, 1904, there shall be elected three members of the Council from each of said districts, one of whom shall be elected to serve for one, one for two, and the other for three years.

Sec. 7. The term of office of members of the Council shall begin on the first Monday in May following their election.

Sec. 8. Until the election of members of the Council at the annual election in 1904, and until their qualification, the Council shall consist of the following named persons, that is to say:

J. Wilfred Broomell, Vernon L. Clark, O. H. Christy, W. W. Dobson, B. A. Fickas, S. S. Green, C. R. Hakes, C. T. Hirst, P. T. Hurley, James Johnson, Emery Kays, W. J. Kingsbury, Wallace A. MacDonald, H. C. Mann, M. W. Messinger, Thos. W. Pemberton, Alfred J. Peters, J. E. Price, L. J. Rice, L. D. Rosseau, C. S. Steward, J. A. Stewart, J. E. Sturgeon, Fred Tait, G. E. Tompkins, Howard L. Underhill, H. G. Van Fossen, A. P. Wallbridge, Henry E. Ware, W.A.Wilson.

The slower the water moves the more it is soaked up b the earth and the longer the streams are fed. The forest shade is helpful because it hinders the melting of snows and evaporation. Fallen leaves and branches are friendly because often they obstruct the flow of rivulets and streams thus causing them to form pools which drain slowly. The whole tendency of forests and mountain vegetation is to cause the process of percolation, evaporation and run-off, to proceed slower, thus causing the streams to be fed more regularly. The floods in forest-protected regions, after a heavy rainfall, or melting snows, will not be so great nor destructive, and the dry seasons will not be so prolonged.

Another great benefit that large areas of forest protecting the headwaters of streams (particularly those from which water is taken for irrigation purposes) affords, is in preventing heavy and disastrous erosion. A small stream of water flowing rapidly will cause vastly more damage than a large volume moving slowly, in carrying away soil and debris and depositing it where it is not wanted. Where mountains and hill sides are covered with forest growth the rush of waters is greatly retarded, but on an open slope there is no hindrance to its violence and destructiveness. In deforested districts, and especially in regions of frequent and heavy storms as in Arizona, erosion is enormous, and it is only a question of time when the accumulation of detritus renders the lowlands barren and unprofitable.

2. By the construction of underground dams to bring

Sec. 9. The Council shall meet at least once in each year at the City of Phoenix, in Maricopa County, Arizona. This regular annual meeting of the Council shall begin on the first Monday in May in each year and continue in session at its pleasure.

Sec. 10. Special meetings may be called and held in such manner and at such times and under such provisions as may be prescribed by the by-laws. The general object and nature of business to be transacted at any special meeting shall be made known by reasonable public notice, such notice to be that prescribed by the by-laws therefor.

Sec. 11. The members of the Council shall serve as such without compensation, but may receive mileage one way at the rate of 10 cents per mile for each day of actual attendance.

Sec. 12. No member of the Council shall be eligible to any office of this Association to which there is attached any emolument or compensation, nor shall he be so eligible until at least two years shall have elapsed after his term of office as Councilman shall have expired; provided, that this inhibition shall not apply to any person by reason of his membership of the first Council.

Sec. 13. The Council shall have power to enact and adopt, and provide for the enforcement thereof, by-laws for the government of the members of this Association, and the management of its business, and the conduct of its affairs, and to repeal, modify and amend the same from time to time. But the Council shall not have power to adopt or to enforce any by-laws that in anywise conflict with any rule or regulation established by the Secretary of the Interior or other agency of the Government for the administration of water from any reservoir, or other works

acquired or constructed by the National Government, or in the acquisition or construction of which it shall have aided, and which may be used for supplying water to the lands of the shareholders of this Association.

Sec. 14. No by-laws shall be passed or enforced which shall interfere with or affect any present existing vested right of any member of this Association to the use of water for irrigatinn.

Sec. 15. All by-laws shall be of general application so far as general laws can be made to apply.

ARTICLE Vll.

Section 1. At all elections the electors shall possess the following qualifications:

(1) Shall be at the time of the election the owner of at least one share of the capital stock of this Association, and shall have been the owner thereof, as shown by the books of the Association, for at least twenty days before such election.

(2) Shall be of the age of twenty-one years or more and of sound mind.

Sec. 2. At all elections each shareholder shall be entitled to one vote for each share of stock owned by him, not however to exceed in the aggregate one hundred and sixty votes, and no more.

Sec. 3. The votes shall be by written or printed ballot, and be voted only by the electors at the polls in person.

Sec. 4. The Council may make reasonable by-laws for the registration of voters and the method of holding elections.

Sec. 5. At all elections the person receiving the highest number of votes for any office shall be deemed elected to such office.

ARTICLE V111.

Section 1. The Board of Governors shall consist of the President, by virtue of his office, and ten other members. Each of said ten members shall be the owner of lands situated within the district for which he is elected, to which shares of stock of this Association are appurtenant, and shall also be a resident of the Reservoir District; and if he should, during his term of office, cease to be such owner or a resident of such Reservoir District, his office shallthereupon, and by reason thereof, become vacant.

Sec. 2. One member of said Board shall be elected at the annual election to be held on the first Tuesday of April, 1904, and at each annual election thereafter from and by the electors of each of the districts in which the territory described in Article 1V of these Articles is or may be divided for the purpose of the election of members of the Council.

Sec. 3. Until the election of members of the Board of Governors at the annual election in 1904, and until their qualification, the Board of Governors shall consist of the following named persons, that is to say:

Frank T. Alkire, A. J. Chandler, Wm. Christy, B. A. Fowler, Lin B. Orme, F. H. Parker, H. Simkins, M. A. Stanford, W. H. Wallace, Sam F. Webb, E. W. Wilbur.

Sec. 4. If a member of the Board of Governors, at any time during his term of office, should cease to have any of the qualifications prescribed for that office, such office shall thereupon become vacant, and in the event of a vacancy from that cause, or by reason of the death, removal from the Reservoir District, or resignation of any member of said Board of Governors, the vacancy shall be filled by the Council if it occurs more than sixty days

prior to a regular election.

Sec. 5. The Board of Governors shall meet in regular session, at the office of the Association, on the first Monday of each month, unless it be a legal holiday, in which case the Board shall meet on the following day.

Sec. 6. Special meetings of the Board of Governors may be called by the President, or by any six of the members of the Board. Such call shall be in writing and signed by either the President, or any six of the members, and shall state the time of such proposed meeting, and the nature of the business to be transacted thereat. Such written call shall be filed with the Secretary, who shall thereupon immediately, and at least five days before the time fixed for such meeting, mail, post-paid, to the President, and each member of the Board, a copy of such call, and shall publish the same in some newspaper published, and of general circulation, in the territory described in Article IV, of these Articles, on three consecutive days before, and exclusive of, the day fixed for such special meeting. If the Secretary fail or refuse to publish such call or to mail copies thereof, as above provided, then either the President, if he issued the call, or any one of the members who issued the same, may make publication and mail copies of the call, with like effect as if done by the Secretary. Special meetings of the Board of Governors shall be held at the office of the Association.

Sec. 7. The members of the Board of Governors shall receive such compensation as shall be prescribed by the Council, by by-laws.

Sec. 8. The Board of Governors shall have the administration of the corporate affairs and business of the Association

and shall manage and conduct the same subject to all the provisions of these Articles and of the by-laws.

Sec. 9. It shall have the power to appoint, subject to removal by it at any time, a General Superintendent, and prescribe his duties and powers, subject to all rules and regulations prescribed by the by-laws, and to employ an engineer, or engineers, and such other employees as may be proper and necessary to effect the purposes of this Association, subject to such rules and regulations as may be prescribed by the by-laws.

Sec. 10. It shall have the power to prosecute, defend, and compromise all law suits; to make all contracts, in the name of the Association, necessary and proper for the conduct of the affairs and the carrying on of the business of the Association, subject to all limitations and regulations prescribed by these Articles or the by-laws.

Sec. 11. It shall have the power to estimate, make and levy all assessments against the shareholders of this Association, to the extent and in the manner authorized by these Articles and regulated and prescribed by the by-laws.

Sec. 12. It shall have the power to make, publish, and enforce rules and regulations concerning the distribution, use and application, of water for irrigation, subject at all times to, and not inconsistent with, these Articles, or with the by-laws, or with any rules, or regulations established by the Secretary of the Interior, or other agency of the National Government.

Sec. 13. It shall keep, or cause to be kept, a record of its transactions, which shall at all times remain in the office of the Association and shall, during office hours, be open to the inspection of the shareholders, or their properly authorized agents.

Sec. 14. It shall hear and determine complaints of shareholders of non-service, or of improper service or distribution of water, or of improper performance of duty by any employee of the Association relative to the distribution of water.

ARTICLE IX.

Section 1. The lands under each separate distributing canal system within the territory described in Article IV of these Articles, shall on the petition of the owners of two-thirds of the shares of the capital stock of this Association appurtenant to the lands in such proposed Canal Division, be formed into a Canal Division, and the boundaries of such division be fixed by the Council. On the petition of the holders of a majority of the shares in this Association owning the lands affected thereby, or without such petition, whenever in the judgment of the Council it will be beneficial, the Council may change, or modify, the boundaries of any Canal Division.

Sec. 2. A Board of Water Commissioners to consist of three members shall be appointed annually by the Board of Governors for each Canal Division. Such appointment shall be made in the month of May in each year and no one shall be eligible for such office, unless he be a resident with the Canal Division for which he may be appointed, and a qualified elector as provided in these Articles. The term of office of the members of the Boards of Water Commissioners shall be from the time of their appointment until the first day of May in the following year, and until their successors shall have been appointed and have qualified, and they may be removed for cause by the Board of Governors, who may fill any vacancy in any Board of Water Commissioners for the unexpired term.

Sec. 3. If a petition signed by shareholders in this Association, constituting a majority of qualified electors, residing in any Canal Division, shall be presented to the Board of Governors at their first meeting, in May, naming three persons eligible for appointment as Water Commissioners, in said Canal Division, and asking for their appointment to such office, such persons shall be appointed as such Water Commissioners.

Sec. 4. In each Canal Division the Board of Water Commissioners thereof shall have the control and management of the local affairs of the canal system therein, and of the distribution of water therefrom, subject to the provisions of these Articles, and to the by-laws, and to the rules and regulations established by the Council, or by the Secretary of the Interior, or any agency of the National Government.

Sec. 5. The Board of Water Commissioners in each Canal Division may appoint a Secretary of the Board and employ a Division Superintendent removable at their pleasure.

Sec. 6. The Board of Water Commissioners may call a meeting at any time of all the land owners in their Canal Division who are shareholders in this Association, to consider and determine whether an assessment or assessments for their special benefit should be levied on the shareholders in said Division. At least ten days' notice of such meeting shall be given by the Secretary of said Board, by posting a notice thereof in three public places in said Canal Division, and mailing a copy of such notice, with postage prepaid, to each shareholder residing in said Canal Division.

Sec. 7. If a majority of such shareholders who are the holders of a majority of the shares of this Association appurtenant

to lands in said Canal Division shall at said meeting approve the levy of such special assessment or assessments and sign a petition to the Board of Governors that the same be levied on the shareholders in this Association, owning lands in said Division, and specifying the amount of said proposed assessment and the purpose for which it should be levied, and said Board of Water Commissioners should recommend it in writing, endorsed on said petition, it shall be the duty of the Board of Governors to levy said special assessment on all the shareholders in this Association owning lands in said Canal Division.

Sec. 8. When so levied the said assessment may when collected be disbursed by the Board of Water Commissioners of said Canal Division for the purpose specified in its levy, and shall be paid out by the Treasurer on warrants drawn on him by the said Board of Water Commissioners; provided, however that nothing in this article shall limit or abridge the right of the Association to make, levy and collect assessments, as elsewhere in these articles provided.

ARTICLE X.

Section 1. A President and a Vice-President of the Association shall be elected at the annual election to be held on the first Tuesday of April, 1904, and every two years thereafter, and shall serve for two years from and after the first Monday of May following their election and until their successors are elected and qualified. Until the election of a President and Vice-President, as above provided, B. A. Fowler shall be the President, and E. W. Wilbur shall be the Vice-President of this Association.

Sec. 2. A Treasurer and a Secretary of the Association shall be appointed by the Board of Governors at its first regular meeting in each year, and shall serve for one year thereafter, and until their successors have been appointed and have qualified.

Sec. 3. The Treasurer and Secretary shall give such bond as may be prescribed by the by-laws; provided, that no member of the Board of Governors, nor the Secretary, shall be accepted as a surety on the bond of the Treasurer.

Sec. 4. The President, Vice-President, Treasurer and Secretary shall perform such duties as are prescribed by these Articles and by the by-laws, wherein such by-laws shall not be inconsistent with law or with these Articles, and shall receive such compensation as may be fixed by the by-laws, which compensation shall be neither increased nor diminished during their respective terms of office.

Sec. 5. In case of the absence, illness, or inability of the President to act from any cause, or in case of a vacancy in that office, the Vice-President shall act in the place and stead of the President. In the event of a vacancy in the offices of both the President and Vice-President, the Council shall call a special election to fill the unexpired terms for both offices; provided, however, that such vacancies, if occurring within sixty days before the next annual election, shall be filled by appointment by the Council.

Sec. 6. The President shall be the chief executive officer of the Association, and shall have general supervision over all other officers of the Association in the performance of

their duties as such, and of the conduct of the business and affairs of the Association. He shall preside at all meetings of the Board of Governors and shall be ex-officio a member of that Board; and perform such other duties as may be devolved upon him by the by-laws.

Sec. 7. All certificates or other evidences of the ownership of shares of stock in the Association issued by the Association shall be signed by the President and Secretary of the Association and shall have the seal of the Association affixed thereto.

Sec. 8. All contracts and instruments in writing executed for, or in behalf of the Association, shall be so executed in the name of the Association by the President and Secretary and shall have the seal of the Association affixed thereto.

Sec. 9. The Treasurer shall receive and be the custodian of all moneys and other funds of the Association. No moneys shall be paid out by the Treasurer unless upon warrants drawn on him by the President and Secretary, except as provided in Article IX Section 8 of these Articles. No warrants shall be drawn on the Treasurer by the President and Secretary except upon the order of the Board of Governors, recorded in the minutes of the Board, and in a warrant record to be kept by the Secretary.

Sec. 10. The Treasurer shall keep a full, complete and accurate account of all moneys of the Association received and disbursed by him, in books belonging to the Association, and shall present a report and account thereof for the last preceding month to the Board of Governors at every regular monthly meeting of said Board, and shall, at the expiration of each quarter, prepare and publish, in such manner as the by-laws may prescribe, a quarterly statement to shareholders showing all such receipts and disburse-

the waters now going to waste in the sands of the rivers to the surface.

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CONSOLATION.

Assuming that the people of this valley are too proud to beg, too energetic to starve, and too ambitious to be satisfied with conditions that fall short of the best possibilities, we have these facts to console us and lead us on:

1. That the flood waters in the Territory are ample, if properly conserved and distributed, to irrigate all the valley lands therein.

2. That there are many good reservoir sites in the adjacent mountains that can be utilized for the conservation of these flood waters.

3. That the conservation and proper distribution of the flood waters of the Salt River Valley drainage district will furnish ample water for the proper irrigation of the 300,000 acres now partially cultivated, causing many blades of grass to grow where one grew before, and increasing fourfold our income by a very slight additional expense.

4. That it will supply sufficient water for 100,000 or 200,000 acres more than are already under cultivation, thus adding many thousands to our population.

5. That additions to our population means lower taxes, increased values greater prosperity, vastly enlarged commercial opportunities and importance, increased railroad facilities, with the inevitable trunk line and lower freight

ments during the last preceding quarter; and the Treasurer shall perform such other duties as may be devolved upon him by the by-laws.

Sec. 11. The Secretary shall act as the Clerk of the Board of Governors, and keep a record of all their proceedings. He shall be the custodian of the seal of the Association, and of all its books, papers and records. He shall immediately upon their adoption and certification to him by the Council, record in a Book of By-Laws to be kept by him in his office, all by-laws adopted by the Council, and shall keep such book open to the inspection of any member of the Association at all times during business hours. And the Secretary shall perform such other duties as may be devolved upon him by the by-laws.

ARTICLE X1.

The Council may create such other offices as may be necessary for the carrying on of the business and affairs of this Association, and prescribe the manner of appointment, powers, duties terms of office, eligibility and compensation thereof by by-laws not inconsistent with these Articles.

ARTICLE X11.

Upon proper complaint thereof by the Board of Governors, duly sustained, the Council may remove from office, the President, Vice-President, Treasurer, Secretary, or the incumbent of any office created by the Council, for incompetence, neglect of duty, misappropriation of funds of the Association, or for violation of any of the provisions of these Articles or of any by-law. The Council shall prescribe by by-laws the procedure for such removal.

ARTICLE XIII.

Section 1. Revenues necessary for the coomplishment of the purposes of this Association shall be raised by an assessment thereof from time to time as required upon and against the shareholders.

Sec. 2. The Council shall have power to make and enforce necessary by-laws for the making, levying, collecting and enforcing of such assessments.

Sec. 3. Assessments for the ordinary cost of operation, maintenance and repair, of the works of the Association, or of those the maintenance and control of which are, or may be hereafter, lodged in the Association, shall be equally assessed against all the shareholders in proportion to the number of shares held by them respectively.

Sec. 4. Assessments for the purpose of constructing or acquiring, or for the betterment, improvement, renewal, replacement, or preservation of any works, property, or rights of the Association, or for the purpose of preserving, or increasing, or more efficiently, or economically distributing the water supplies available for distribution by the Association, or for the fulfillment of any obligation undertaken by the Association, in any contract, agreement or other arrangement with the United States Government, or necessary for the accomplishment or carrying out of any of the purposes of the Association, may be equally assessed against all the shareholders in proportion to the number of shares owned by them respectively.

Sec. 5. Assessments for expenditures for purposes that are of benefit to a part only of the shareholders may be specially

assessed in proportion to such benefits against such shareholders, but no expenditure to be provided for, or covered by, such special assessment shall be made, or obligation to expend the same incurred, except upon the petition of the holders of two-thirds of the shares to be so specially benefited thereby.

Sec. 6. Assessments shall become, from time to time as they are made and levied, and, until they are paid or otherwise discharged, shall be and remain a lien on the lands of the shareholder against which they are levied, and upon the shares of stock appurtenant to said lands, and all rights and interests represented by such shares. The manner of fixing the lien and enforcing the same shall be prescribed in the by-laws.

Sec. 7. Except for the ordinary operation, maintenance and repair, no work shall be undertaken, purchase made or indebtedness incurred or be authorized during any one year whereof the cost or amount thereof shall exceed fifty thousand dollars ($50,000.00) until it shall have first been ratified by at least two-thirds of the votes cast at an election to be called for that purpose. Special elections may be called and held for such purpose under such by-laws as the Council may prescribe, not inconsistent with these Articles.

ARTICLE XIV.

Nothing in these Articles of Incorporation, or in the fact of becoming a member of this Association, shall be construed as affecting, or intended to affect, or in any way interfere with the present vested rights of any person to the prior use, or delivery, of the natural appropriated flow of the waters of the Salt and Verde rivers.

ARTICLE XV.

The individual property of the shareholders shall be exempt from liability for incorporate indebtedness of this Association.

ARTICLE XVI.

The incorporate indebtedness shall not exceed two-thirds of the amount of the capital stock.

ARTICLE XVII.

This corporation shall endure for the term of twenty-five (25) years.

ARTICLE XVIII.

These Articles of Incorporation can only be amended by the shareholders at a regular annual election or at a special election called for that purpose. No proposed amendment shall be submitted to the shareholders until it shall have first received the approval of two-thirds of the members of the Council at a regular or duly called session thereof, nor shall any such proposed amendment be so submitted until it shall have been published in full at least once in each week for four consecutive weeks in at least three newspapers published and of general circulation within the territory described in Article IV, of these Articles, the last of which such publications shall be not less than 10 nor more than 20 days before any such election.

ARTICLE XIX.

This Association may accept and avail itself of, or subject itself to, the provisions of any law or laws enacted, or that may be enacted by Congress, or the Legislative Assembly of the Territory, or State, when it becomes a State, of Arizona, relative to corporations, which may be applicable to corporations organized for like purposes as this Association. Such acceptance or subjection shall be valid when ratified by at least two-thirds of the votes cast at any annual election, or at any special election called for the ratification thereof.

ARTICLE XX.

The seal of this Association shall be a figure of two concentric circles, the outer being 2 inches and the inner 1½ inches in diameter. In the space between the two shall be the words, "Salt River Valley Water Users' Association," and bearing within the center space an unrolled scroll with the words and figures thereon: "Incorporated, 1903, Arizona."

Witness our hands hereto, this fourth day of February, A. D., 1903.

The next step was to provide for the creation of a lien on the land, so that the Government would be assured of ample security for the cost of the construction of the reservoir as required under the law.

The work of securing the signatures of the owners of the lands to the proposed articles was carried on steadily: the valley was divided into districts and the men in each district best fitted for the work was placed in charge - and it was some job to get sufficient signatures.

The work of securing the signatures of the land owners was kept up persistently from early in February until the 17th, of July, 1903, when the books were closed with approximately 200,000 acres signed up: A report was then made to the Government in a brief, as follows:

Phoenix, Arizona.
May 25th, 1903.

To the Honorable,

The Secretary of the Interior:

SIR:

The Salt River Valley Water Users' Association, a corporation organized and existing under the laws of the Territory of Arizona, begs leave to submit herewith a statement of the purposes of its organization, and of the conditions that prompted the association, and a presentation and an explanation of the methods adopted to accomplish those purposes.

The association, as is above suggested, is a corporation organized under the laws of the Territory of Arizona. It has for its purpose, and its only purpose, the supply of water to its members who are bona fide holders and occupants of lands in the Salt River Valley for the irrigation of those lands, at the actual cost of such service.

The plan of organization, and it will be shown it must so result in practice, excludes the possibility of pecuniary profit to its members or to any other person, directly or indirectly, from the operation of the association, except that general benefit accruing from an effective conservation of the waters falling on the rain-shed tributaries to the valley, (a large part of which now runs off in floods) and the just and economical distribution of them to the settlers of the valley.

The history of irrigation in this valley begins with 1868 or 1869. There has since that time grown up and been practiced in the valley greatly diverse systems of irrigation, until at the present time there is almost inextricable confusion, sharp conflict, constant dispute, vexatious uncertainty, and consequent litigation. To adjust these variant conditions and, legally and practically speaking, conditions which cannot much longer exist with any continued hope of the prosperity of the settlers of the

valley, to some uniform, consistent, certain and just system, it seemed to us that the only method was the voluntary association of the representatives of the variant and disputant interests, and the adoption of some certain, plain simple but adequate plan for the accomplishment of that end.

As the settlers very earnestly desire the benefit of the provisions of the Act of Congress entitled "An Act appropriating the receipts from the sale and disposal of public lands in certain states and territories to the construction of irrigation works for the reclamation of arid lands," approved June 17, 1902, and commonly known as the "National Irrigation Act", the general principles relative to the appropriation, distribution and use of water for irrigation outlined in that Act, and in former Acts of Congress on that and kindred subjects, and in the expressions of policy found in official reports of the Honorable Secretary of the Interior, have been taken by us as controlling guides in formulating and adopting our plans. What we have conceived to be the policy of the Government relative to the appropriation and use of water for the reclamation of arid lands we have adopted, and if the plans of the Salt River Valley Water Users' Association shall be consummated, there will have been adopted and put in practice, there, a uniform, consistent, just and practical and adequate system, in lieu of the heretofore prevalent incongruous, complex, unjust impracticable and uncertain variety of systems.

With this prefatory statement, we wish now respectfully to call your attention to the following representations and explanations.

We have endeavored to be concise and accurate -- if what we submit shall appear to be voluminous it must be attributed to the

magnitude of the subject.

In the arrangement of our presentation of the matter we have consulted the convenience of the Secretary. To present the whole subject may involve repetition of matters already matters of record or within the knowedge of the Secretary, but we trust that the convenience of the compilation will justify apparent prolixity.

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That part of Arizona within which is included the Salt River Valley, was acquired from the Republic of Mexico in 1848 by treaty generally known as the Treaty of Guadalupe Hidalgo.

Art. V. Treaty U.S.S.L., 9pp 929,930.

The remainder of the territory now constituting the Territory of Arizona was acquired from the Republic of Mexico in 1853 under the provisions of what is commonly known as the Gadsden Treaty.

U.S.S.L.

The territory now constituting the Territory of Arizona was prior to 1864 a part of the organized Territory of New Mexico.

By Act of Congress entitled "An Act to provide for a temporary Government for the Territory of Arizona and for "other purposes", approved February 24, 1863, that part of New Mexico situated west of a line running due south from the point where the southwest corner of the (then) Territory of Colorado joins the northern boundary of New Mexico to the south boundary of New Mexico, was erected into a temporary Government by the name of the Territory of Arizona.

U.S.S.L. 12 p 664

All legislative enactments of the Territory of New Mexico were extended to and continued in force in the new Territory of Arizona until they should be repealed or amended by future legislation.

id.

The first legislature of the Territory of Arizona met and was organized on the 4th day of October, 1864.

Compiled Laws Arizona 1864-1871.

One of the enactments of the first legislature was that known as the "Bill of Rights". Article 22 of that Act is as follows:-

"All streams, lakes and ponds of water capable of being used for the purpose of navigation or irrigation are hereby declared to be public property; and no individual or corporation shall have the right to appropriate them exclusively to their own private use except under such equitable regulations and restrictions as the legislature shall provide for that purpose."

Howell Code (1864)

This provision was brought forward in the several recompilations and revisions of the statutes of the territory, since that time, and is now on our statute book.

Compiled Laws Arizona	(1864-1871)	25	
Revised Statutes Arizona	(1877)		
" " "	(1877)	par.	2863
" " "	(1901)	"	22

At the first session of the legislature of the Territory (1864) there was enacted a law which we locally denominate "acequia (Spanish:- Canal, ditch) Law". This was substantially

a rescript of a law theretofore enacted by the legislature of New Mexico. By that law, it is provided:-

"Sec. 1. All rivers, creeks and streams in the Territory of Arizona are hereby declared public and applicable to the purposes of irrigation and mining as hereinafter provided."

"Sec. 2. All rights in acequias or irrigating canals, heretofore established shall not be disturbed, nor shall the course of such acequias be changed without the consent of the proprietors of such established rights."

"Sec. 3. All the inhabitants of this territory who own or possess arable and irrigable lands shall have the right to construct public or private acequias and obtain the necessary water for the same from any convenient river, creek or stream of running water."

Sec. 4. Provides for rights of way over public lands.

Sec. 5. Prohibits obstruction and interference of flow of water.

Sec. 6. Gives mining reduction business a preference, but provides for compensation to the irrigator, if damaged.

Sec. 7. Similar provisions as to other mining operations.

Sec. 8. Prohibits foot-paths across fields.

Sec. 9. Provides that owners of land shall work on acequia whether they cultivate or not.

Sec. 10. Regulates ratio of work.

Sec. 11. Requires cattle to be herded from fields.

Sec. 12. Rights of way for community, or public, ditches.

Sec. 13. Provides for the election of over-seers of public acequias.

and passenger rates, better society, vastly more influence and statehood.

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HOW TO PRESERVE PRESENT WATER SUPPLY.

And this brings us directly to the second question propounded at the head of this section: "How may we best husband the surplus waters so as to make them available during seasons of scarcity?"

There is but one answer to this question, and that is by the construction of adequate storage reservoirs.

Nature has not only been magnanimous to Arizona, in her magnificent scenic endowments, but most generous in her provisions for industrial wealth. Her hills are graves of buried treasure; her mountains are covered with a wealth of trees and grasses; her valleys are hotbeds of riches, but neither wealth nor prosperity will come at our call. They must be sought for and some equivalent given in time and labor. So it is with storage problems. Nature, with miraculous foresight and knowledge of future requirements, has provided the most admirable sites and arranged her water sheds for the rapid centralization of the abundant precipitation of rain and snow, and left the details of her great plans to be completed by man's skill and ingenuity.

The principle storage projects which have been surveyed by individuals and corporations, or examined by the Government, are known as the Rio Verde, Tonto Basin, Walnut Grove, Agua Fria, Lower Gila, Queen Creek, Buttes and Cave Creek.

Sec. 14. Manner of electing over-seers.

Sec. 15. Provides for pay of over-seers.

Sec. 16. Prescribes duties of the over-seer.

Sec. 17. "During years when a scarcity of water shall exist owners of fields shall have precedent of the water for irrigation, according to the date of their respective titles or their occupation of the lands, either by themselves or their grantors. The oldest titles shall have preference always."
(sic).

Sec. 18. Concerning work on acequia.

Sec. 19. Penalty against over-seer, after having undertaken to serve, for misconduct.

Sec. 20. New election in event of removal of over-seer.

Sec. 21. Penalty imposed on land owner for failure to furnish labor.

Sec. 22. Punishment for unauthorized interference with acequia.

Sec. 23. Disposition of fines and forfeitures collected.

Sec. 24. Appeal from prosecutions.

Sec. 25. "The regulations of acequias which have been worked according to the laws and customs of Sonora and the usages of the people of Arizona shall remain as they were made and used up to this day, and the provisions of this chapter shall be enforced and observed from the day of its publication."
(sic).

Sec. 26. Plants and trees growing on banks of ditch belong to land owners, etc.

Sec. 27. "Any person owning lands which may include a

spring or stream of running water, or owning lands on a river where there is not population sufficient to form a public acequia may construct a private acequia for his own use, subject to his own regulations, provided it does not interfere with the rights of other." (sic.)

Howell Code (1864)
Comp. Laws (1864-1871) 501
Comp. Laws (1877) 538
Revised Statutes (1877) par. 3199-3226
Revised Statutes (1901) par. 4174-4201.

In the revision of 1887 there is the following provision:

"The common law doctrine of riparian water rights shall not obtain or be of any force or effect in this Territory."

Revised Statutes Ariz. (1887) par. 3198.

The provision is carried forward in the Revised Statutes of 1901.

Revised Statutes Ariz. (1901) par. 4168.

By an Act of the Territorial Legislature approved 22nd, March, 1893, it is provided:-

"Sec. 1. Whenever any storage reservoir shall be constructed in the Territory of Arizona and water stored therein for subsequent distribution for irrigation or other useful purposes in times of shortgage of water, that the owners of such reservoirs and the water stored therein shall have the right to make use of the natural channels of streams in this territory to conduct said waters to the place or places where they shall desire to use the said waters or have them used, and to divert the same from the said natural channels at such places as shall be most convenient for said purposes.

"Sec. 2. That in the event that the use of the waters which naturally flow in said natural channels shall have been previously appropriated by others who have acquired the prior right to the use of them, then and in such case, the owners of such reservoirs shall nevertheless have the right to make use of said natural channels without diminishing the quantity of water which naturally flows therein and the use of which shall have been appropriated by others as aforesaid. In cases where the parties interested cannot agree upon the division of the water turned into any natural channel from any storage reservoir from the water naturally flowing therein and the use of which shall have been previously appropriated by others, and if there be any difficulty in ascertaining the several quantities to the use of which each party shall be entitled, then all the waters flowing in any natural channel shall be divided and distributed between the parties interested in the manner following, to-wit: There shall be ascertained the quantity of water which shall flow into said natural channel from the storage reservoir and from that quantity there (shall) be deducted one-half of one per centum for each one mile of length of the natural channel through which said water shall flow before being diverted therefrom and the owners of storage reservoirs and those acting by their permission shall have the right to divert from the natural channel the quantity of water which shall flow into the natural channel from the storage reservoir after deducting therefrom said per centum thereof, and said prior appropriations of the waters naturally flowing in said natural channels shall have the right to the use of all the remainder."

Acts Legislature 1893 p 15.

This Act is carried forward to the present revision of our statutes.

R.S.Ariz. (1901) pars. 4202-4203.

In the same year, 1893, the Territorial Legislature enacted as follows:

"Section 1. That any person or persons, company or corporation shall have the right to appropriate any of the unappropriated waters or the surplus or flood waters in this Territory for delivery to consumers, rental, milling, irrigation, mechanical, domestic, stock or any other beneficial purpose, and such person or persons, company or corporation for the purpose of making such appropriation of waters as herein specified, shall have the right to construct and maintain reservoirs, dams, canals, ditches, flumes and any and all other necessary water ways. And the person or persons, company or corporation first appropriating water for the purposes herein mentioned shall always have the better right to the same.

"Sec. 2. Every person or persons, company or corporation, who shall desire to appropriate any of the waters of this territory for the uses and purposes mentioned in Section 1 of this Act shall first post at the place of diversion on the stream or streams as the case may be, a notice of his, their or its appropriation of the amount of water by it or them appropriated, and that they intend to build and maintain a dam at a certain place, in said notice to be designated, and in case of storage of water by reservoir that they intend to construct and maintain a reservoir at a place to be in said notice stated, and that they intend to construct and maintain a

canal or canals, as the case may be, from the point of diversion of said water to some terminal point to be mentioned in said notice, a copy of which shall be filed and recorded in the office of the County Recorder in which said dam, reservoir and canal is contemplated to be constructed, and if said canal runs through more than one county, then such notices shall be filed and recorded in each county through which said canal is to be constructed, and a copy of said notice shall also be filed and recorded in the office of the Secretary of the Territory. That said person or persons, company or corporation after posting and filing their notice as herein provided, shall within a reasonable time thereafter construct their dam or dams, reservoir or reservoirs, canal or canals, as the case may be, and shall after such construction use reasonable diligence to maintain the same, for the purposes in such notices specified, and on failure to within a reasonable time after posting and filing of such notice or notices as hereinabove provided to construct such reservoir, dam or canal as in such notice specified or to use reasonable diligence after such construction to maintain the same, shall be held to work a forfeiture of such right to the water or waters attempted to be appropriated.

"Sec. 3. All Acts and parts of Acts in conflict with the provisions of this Act are hereby repealed.

"Sec. 4. This Act shall take effect and be in force from and after its passage."

And this Act is carried forward to the present revision of our statutes.

R. S. Ariz. 1901 pars. 4169, 4170.

In the same year, 1893, the Territorial Legislature enacted the following:-

Acts 1893, p 132.

"No. 89. AN ACT

"To regulate canals and ditches built and maintained for the purpose of conveying water to consumers thereof for pay or hire.

Be it enacted by the Legislative Assembly of the Territory of Arizona:

"Sec. 1. All corporations, associations or individuals, owning, managing or controlling any canals, irrigating ditches, flumes, pipe lines or other means for conveying water from any public stream in this Territory, on or to the lands of occupants for the purpose of selling, hiring or letting the same to such occupants for pay or hire, shall not sell, hire or let more water than the said canals, ditches, flumes or pipe lines may be estimated to carry at any one time, whether such contract be made for measure, time or acreage quantity.

"Sec. 2. Such persons, associations or corporations as provided for in the preceding section, shall at all times keep their ditches, canals, flumes or pipe lines in good repair and condition, so as to carry the full amount of water that such person, association or corporation have contracted to carry and deliver to the persons contracted with, during the time specified in such contract, and a failure to deliver the quantity of water contracted for (when there be sufficient in the stream or head) shall make such persons, corporations or associations liable for all such damages that may arise or be sustained by the parties buying, hiring or renting water from said carriers.

"Sec. 3. When any corporation, association or individual owning or controlling any canal, water ditch, flume or pipe

line, as in this Act provided, shall permit their respective ways for carrying water, or their dam, headgates or other appliances for securing the water at the head, to get out of repair or reduced in capacity By filling up or otherwise, so that the same will not carry the amount of water so contracted to be delivered to the users thereof, and shall not within a reasonable time repair, cleanse or restore the same, then it shall be lawful for such persons who have contracted and paid for such water to enter in and upon said canal, ditch, flume or line and make repairs, clean and restore said premises at their own proper cost and charge and the reasonable cost of such repairs, cleansing and restoration shall be a lien on such canal, ditch, flume or line, which lien may be foreclosed as other liens upon real estate in any court of competent jurisdiction, and the premises sold and proceeds applied in payment of said claim and lien, the surplus, if any, to be paid to the owner thereof; Provided, that written notices of the specific repairs of cleansing and restoration to be done and the maximum cost thereof shall be served on such corporation or others owning or controlling such premises at least six days before entering upon such premises for the purpose of such repairs, cleansing and restoration; and if within said six days the corporation or others owning or controlling such canal, ditch, flume or line shall commence and with reasonable diligence prosecute such repairs, cleansing and restoration, no such right of entry shall exist; Provided, further, that such repairs, cleansing and restoration shall be reasonable in extent, method and cost and so made as to be of the best permanent benefit to the property; Provided further, that

within thirty days after the completion of said work of repairs, cleansing and restoration, a notice under oath of a lien claimed under this act, stating the amount of the expenditure actually made in the work aforesaid, containing an itemized statement of the sums so expended and the purpose for which each was expended, and a statement of the facts upon which said lien is claimed, shall be filed in the office of the Register of Deeds of the county in which such work was done and recorded in a book kept by him for that purpose; and Provided further, that such owners or managers of such water ways shall not be held liable under this act for any deficiency on the supply of water, which may be caused by an act of omission or commission, over which they have no control, or that may be caused by flood, storms or drouth.

"Sec. 4. All acts and parts of acts in conflict with the provisions of this Act are hereby repealed.

"Sec. 5. This act shall take effect and be in force from and after its passage."

This act is carried forward in our present revision

R.S. Ariz. pars. 4171-4173.

In 1895 the legislature enacted the following:

Acts 1895, p. 117.

No. 81 AN ACT

"To prevent the unnecessary waste of water.

"Be it enacted by the Legislative Assembly of the Territory of Arizona.

"Section 1. Any person using water (during the season when there is a scarcity of water for irrigation), who wilfully waste the same, or wilfully or knowingly allow the same to run

to waste, to the detriment or injury of any other person, shall be deemed guilty of a misdemeanor and on conviction thereof shall be fined in any sum not exceeding twenty-five dollars.

"Sec. 2. This act shall take effect from and after its passage."

This act appears in the last revision of our statutes, 1901, in the penal code.

R.S.Ariz. 1901, Penal Code P. 612.

An Act was passed by the Legislative Assembly and approved March 21, 1901 entitled "An Act to Amend Water and Water Rights of the Code Revision."

Section 1 of this act is:

"Section 1. That paragraph 3741 be amended so as to read as follows: "Then follows the purported amendment.

By some mistake in the preparation of the Revision of 1901, there is a confusion in the numbering of the paragraphs, Paragraph 3741 or the Revision as printed under official authority, has no reference to water or water rights and is not a part of that title. The Act above referred to is not printed in the body of the Revision but in an appendix. The Revision went into effect, by the terms of the enactment, on the 1st, September, 1901.

However, reference to the Revised Statutes (1901) leads us to suppose that by paragraph 3741 of the Revision is meant paragraph 4169 of the Revised Statutes.

The purported amendment consists in defining the purposes for which appropriations may be made to be "for beneficial use for irrigation, mining, or manufacturing purposes" instead of:

"for delivery to consumers, rental, milling, irrigation, mechanical, domestic, stock or any other beneficial use" as in paragraph 4169 of the Revised Statutes, as we have heretofore quoted.

See Acts of 1893 p 132 Sec. 1 and ante of this statement page 10.

This same Act purports to amend paragraph 3743 of the Code Revision -- as we have said of the 1st section, there is apparently a confusion of numbers. It probably is meant to amend paragraph 4171 of the Revised Statutes which we have heretofore quoted.

The purported amendment is in defining the purposes of conveying water. The purpose stated to be "for the purpose of irrigating said lands" instead of "for the purpose of selling, hiring or letting the same" &c as in paragraph 4171.

See Acts 1893 p 132, Sec. 2 and ante of this statement page 11.

Like changes are attempted to be made in paragraphs 4172 and 4202.

See the Act, appendix A. R. S. 1901 p 1484.

In the Penal Code, there are some provisions, concerning the stealing of water, etc. (Par. 493 Penal Code R. S. 1901)

Congress in 1866 enacted:-

"Sec. 2339. Whenever by priority of possession, rights to the use of water for mining, agricultural, manufacturing or other purposes have vested and accrued, and the same are recognized and acknowledged by the local customs, laws and the decisions of the courts, the possessors and owners of such vested rights shall be maintained and protected in the same; and the right of way for the construction of ditches and canals for the purposes

It is essential to a proper understanding of the irrigation question as it concerns Arizona, and for the general information of the public, that a short description of the more important of these reservoir schemes be given.

The great bulk of irrigable lands in the Territory lie within the borders of Maricopa County; consequently, it is here that developments must be made.

The people who are to pay the bills and be the beneficiaries of increased water supplies should have all the facts before them. Nothing should be hidden or veneered by sophistry or falsehoods.

If the present projected storage schemes could be carried to immediate completion there would remain scarcely a foot of tillable land in the entire country in five years unclaimed and uncultivated.. This state of affairs would mean a voting and producing population of 100,000 men, counting a family to each 20 acres. These producers with their families would mean a population of 500,000 people maintaining and enriching themselves by agriculture alone. An additional 500,000 or more would be maintained in our cities by traffic and by manufacturing enterprises. This is no idle dream but a very conservative estimate based upon reliable data.

Taking up the various projected storage schemes in the order given above, we have, first:

RIO VERDE.

This enterprise contemplates the storage of waters at a site on the Rio Verde known as the Horseshoe Reservoir.

631.7
C59

Memoranda of the history of the canals of the Salt River Valley from the first of the present system to the letting of the contract for the construction of the Roosevelt Dam.

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When the first white men settled in the Salt River Valley they found the Indians cultivating small tracts of land by irrigation, having a few ditches taking water from the Salt and Gila rivers. The first ditch to be built by white men was the Swilling Ditch which afterwards was known as the Salt River canal. This ditch was commenced in 1867 and was completed in 1869.

The second canal was the Maricopa which used the same head as the Salt River canal, this being located about five miles east of Phoenix and near the present packing plant of the Tovrea Packing Company.

The land shows evidence of cultivation in prehistoric times by irrigation from the same source as at present. Cultivation in recent times began about the year 1869. From the cultivation of a few hundred acres in 1869, the area of such cultivation in the valley has increased until at the present time there are approximately 151,000 acres attempted to be cultivated from water diverted from the Salt River at various points of diversion on the river at or above the "Joint Head" hereinafter described. Although all the water flowing in the Salt River is, in the lower stages of the

herein specified is acknowledged and confirmed.

"Sec. 2340. All patents granted or pre-emptions allowed, shall be subject to any vested and accrued water rights, or rights to ditches and reservoirs used in connection with such water rights as may have been acquired under or recognized by the preceding action."

U.S.R.S. 1878 Sec. 2339, 2340

It may be noted here that these provisions have been held by the Supreme Court of the United States to be not only confirmatory of rights existing, but operates as a continuing grant of authority for the acquisition of subsequent rights under such "local customs, laws and decisions of the courts."

See:- Broder v. Milling Co. 101 U.S. 276

Basey v. Gallagher 20 Wall. 670

Also

N.M.Co. v. Ferris & Sawy. 176

Beaver &c. Res. Co. v. Res. Co.
40 Pac. Rep. (Colo) 1066-1069

And further that local statutory law as a source of such rights will prevail over a local custom if there be a conflict.

Basey v. Gallagher 20 Wall 670

Congress March 3rd, 1877, enacted what we commonly denominate the "Desert Land Act". This Act provides for the sale of desert lands in certain states and territories.

After providing that any citizen &c. may purchase and reclaim desert lands, the first section of that act proceeds as follows:-

"Provided, however, that the right to the use of water by the person so conducting the same on or to any tract of desert land of 640 acres, shall depend upon bona fide prior appropriation; and such right shall not exceed the amount of water actually appropriated, and necessarily used for the purpose of irrigation and reclamation; and all surplus water over and above such actual appropriation and use, together with the water of all lakes, rivers and other sources of water supply upon the public lands, and not navigable, shall remain and be held free from the appropriation and use of the public for irrigation, mining and manufacturing purposes, subject to existing rights."

19 St. 377

Sup. R.S. 1874-1891 (2nd ed. 137.)

There are other acts of our local legislature and as well of Congress that relate, incidentally to canals, reservoirs, water, its appropriation, use, waste, etc., but none of them, we think are, or attempt to be, definitive of the right or manner of appropriation, or the basis, measure or limit of the right, nor to any of the subjects included in the consideration of this presentation, except the National Irrigation Act.

That Act we need not quote at length here, but will have occasion, from time to time, to advert to it.

THE DECISIONS OF THE COURTS

There have been a number of cases involving the use of water for irrigation decided by the Supreme Court of the Territory.

The following is a list of them in their chronological order:

Campbell v. Shivers 1 Ariz. Rep. 161
S.C. 25 Pac. Rep. 540

Clifford v. Larrien 11 Pac. Rep. 397

Hill v. Lenormand 16 Pac. Rep. 266

Gray v. Salt R.V.C.Co. 12 Pac. Rep. 607

Cough v. Wing 17 Pac. Rep. 453

Dyke vs. Caldwell 18 Pac. Rep. 276

Oury v. Goodwin 26 Pac. Rep. 376

Austin v. Chandler 42 Pac. Rep. 483

Consolidated C. Co. v. Mesa C. Co.
53 Pac. 575

Henshaw v. Salt R.V.C.Co. 54 Pac. Rep. 577

Hunning v. Porter 54 Pac. Rep. 584

Miller vs. Douglas, 60 Pac. Rep. 722

Biggs v. Utah etc. Co. 64 Pac. Rep. 494

Slosser v. Salt R.V.C.Co. 65 Pac. Rep. 332

Wormser v. Arizona Canal Co. No. 708
District Court, Maricopa County

U.S. v. Haggard, et al, No. 19,
District Court, Maricopa County.

The last two noted cases were decided in the District Court, and are not officially published. Much of the Wormser case is quoted in and is known as the "Kibbey Decision", a copy of which is submitted herewith.

A copy of the opinion of Chief Justice Kent, sitting as District Judge, in U.S. v. Haggard is appended hereto.

The first case cited, that of Campbell v. Shivers is a decision of no point that would be a matter of peculiar interest in the consideration of our proposition. It is simply the appli-

cation of the rule that possession and user for a period of five (5) years gives the right, as between rival claimants to the same right.

The next case, that of Clifford v. Larrien (11 Pac 397) is of some interest, in that it decides that the right of a water user to the use of the water appropriated by him, may be entirely distinct from the ownership or control of the means of carrying the water to the place of use.

In Clough v. Wing 17 Pac. 454 the right of appropriation is recognized, the common law rule of riparian rights is denied application and priority of rights in point of time of the several appropriations is practically asserted. Beneficial use is laid down as the basis and measure of the right of appropriation. The manner of initiating and consummating the water appropriation is also briefly discussed.

In Dyke v. Caldwell 18 Pac. 276, the question was as to whether requisite diligence had been observed by one who sought to appropriate water, between the time of his initiating the right and its consummation by actual diversion and use.

In Austin v. Chandler 42 Pac. 483, the question involved was as to the right of a subsequent appropriator to use the water of a prior appropriator for use for mechanical purposes, if after such use by the latter, the water were returned into the ditch of the prior appropriator above the place of his use, undiminished in quantity. As the prior appropriator was not injured, it was held that such intermediate use might be made.

In the case of the Consolidated Canal v. Mesa Canal Co.

53 Pac. 575 no principles peculiar to irrigation law were decided.

In Henshaw v. Salt River Valley Co. 54 Pac. 577, the principle question involved was one of pleading. The cause of action was an alleged malfessance of the directors of a Canal Company.

In Hunning v. Porter 54 Pac. 584, it was decided that the right to the prior use of water for irrigation acquired by priority of appropriation was an absolute right.

In Miller v. Douglas 60 Pac. 722, it was decided that where an appropriator of water entered upon the inclosure of another to change his point of diversion, and continued to divert the water for six years, the occupant of the enclosure was estopped by acquiescence from denying the appropriator's right, on the ground that he was a trespasser.

In Biggs v. Utah etc., Co. 54 Pac. 494, the dispute was between various members of a ditch company, certain persons had constructed a ditch, by which they diverted water from Salt River, for the irrigation of 25 quarter sections of land. The court held them to be, as among themselves, co-appropriators and that, consequently, there was no priority among them. The interests of the several irrigators were represented by certificates, each representing one-twenty-fifth interest in the ditch, making in all twenty-five shares. Subsequently there were added seven additional shares, making in all thirty-two. Still later each of these shares was divided into four, making, in the aggregate, one hundred and twenty-eight shares. A number of these shares were then sold to others than the original landowners and the water represented by

such shares was used on new lands. It had been the practice of the company, from its organization to the time of the commencement of the suit, to, in times of scarcity, pro-rate the water amongst all the shareholders. The suit was by the shareholders owning the older lands to compel the delivery of water to them, in times of scarcity, before the newer lands were served. The court denied the right of the plaintiffs to their priority. The court held that inasmuch as they were co-appropriators there could be no priority, and that in any event the plaintiffs were estopped by their wrong acquiescence in the practice of pro-rating. The court seems also to have held in this case, that the right to the use of water, appropriated from public sources, is not appurtenant to the land but is the subject of transfer. This view, however, is modified by the statement of the court, that this change of place of use cannot be made to affect the rights of other appropriators.

In the case of Slosser v. Salt R.V.C.Co., 65 Pac. 332 the Supreme Court at its last session granted a petition for a re-hearing.

We have not attempted to digest these cases and have gone no further than to merely indicate the subject of the decisions, as we shall hereafter state, whatever of uncertainty, or of conflict, there may be in the adjudication by our courts, we attempt to reduce the whole system to a uniform basis.

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The history of irrigation, in this valley, extends over a period of about thirty-five years last past.

Nothwithstanding the existence of our Public Acequia Law, there has never been, so far as we can recall, any ditches or canals constructed or operated under it, in this valley. The system of canals, if it may be called a system, is the result of more spontaneous growth without any preconceived plan and without uniformity, either of theory or practice.

About 1868 a few settlers constructed a ditch on the north side of Salt River and diverted the water therefrom upon some lands on the north side of the river and east of the present site of Phoenix. The statutory provisions for the operation of acequias, and for the regulation of the rights of irrigators, was ignored. The owners of the ditch were associated together, but without any particular formality, and without any particular rules for their government or the definition of their rights, among themselves. There being plenty of water for the use of all of these earlier settlers, there would not and did not arise among them any conflict of claims, and hence there was no necessity for any definition of their rights to the use of water. The ditch was what is known in the country where irrigation is practiced as a "community ditch". It was, as its name implies -- there was a community of interest, of right and of obligation amongst themselves. Each contributed to the construction and maintenance of the ditch and participated in its benefits in proportion to their shares in the community; the basis of that share being, generally, the proportionate part of land served by the ditch, owned by each. The estate in the ditch was probably that of one of co-tenancy and the

status of the co-tenancy in the administration of its affairs was practically that co-partners. As the number of settlers increased, the interest of the several members of the community became to be represented by certificates; the certificates representing the interest of the holders in, not only the physical property of the association, as its dam, ditch, tools and other property, but his relative right to the use of water. The management and administration of the affairs of the association gradually approached the similitude of a corporation, but they did not, in fact, incorporate until later. These shares or interests in the community were not deemed to be appurtenant to any particular land and were held, in practice, to be assignable and the assignee might or might not use the water, which it was held to represent, and upon lands, indifferently, or he might, upon his certificate, lease the water to any other person, whether he be a member of the association or not, to be used by that other person upon any lands within the service limits of the ditch. Later, this voluntary association was incorporated. The incorporators taking stock in proportion to their interests in the old association. There seemed to be no change in the practice by the corporation from that formerly prevalent with the association. In the corporation each stockholder, as he had been in the association, was deemed to be an owner of an aliquot part of the water diverted and carried by the ditch, and he might use that part upon lands of his own, or he might not use it at all, or he might lease it to others for use, on any lands which would be reached by the ditch or its laterals. In fact a large proportion of these shares of stock became latterly to be owned by persons who were not owners of land. Many of these shares had been pledged to banks

and other money lenders by the original owners as security for debts and upon default had been forfeited to the money lender. These shares, with their alleged incident rights, became the subject of common traffic.

This is a brief history of what was known as the old Swilling ditch.

The Salt River Valley Canal Company and the Maricopa Canal Company are corporations and are successors to the older Swilling Canal Company. These companies are incorporated under the laws of the Territory. They have fifty shares of stock each. For a while after their incorporation, the practice was to consider that the ownership of each share entitled the holders of it to the one-fiftieth part of the water diverted and carried by the canal. These shares were never made appurtenant to any land and were, in practice, assignable as shares of stock in an ordinary corporation. The shares had incident to them the same rights as were incident to the shares in the older association.

Later the Salt River Valley Canal Company made a provision whereby there were issued to the share owners for each share owned by them three "water rights". The greater portion of the share owners availed themselves of this provision. This, in effect, amounted to a segregation of any right to water in the canal from the ownership of the stock. The shareholder who availed himself of this provision retained, by virtue of his stock, simply those rights that are incidental to the ownership of stock in ordinary corporations; that is, the right to hold corporate office, participate in the management of the corporate affairs, to have dividends, etc. The water right was evidenced by a deed made by the corporation to

the holder (who might be either the shareholder or an assignee of the shareholder), and the "right" was expressly made appurtenant to and inseparable from the lands described in the deed. The extent of land to which a whole right was appurtenant was 80 acres; the estimated volume of water belonging to the "right" is thirty-three and a third miner's inches. (Note: It is commonly estimated in this valley that a miner's inch is the fortieth part of a cubic foot flow of water per second of time). It has continued to be the practice, until within the past year or two, to lease the water right incident to the shares, in cases where the water rights had not been segregated from the shares. In many instances, where segregation was made, the shareholder had either no land or had not enough land to take up the water rights that were segregated, in such cases, until the shareholder could find a place to dispose of his right, the right was evidenced by a certificate and was what was called a "floating right"; that is, one which had not become attached to any particular piece of land. These "floating rights" became the subject to sale and lease and were used indifferently upon any lands, as the lessee or vendee might, from time to time, choose. Most of these rights, under this canal, have become attached and are now appurtenant to designate lands. The shares of stock, from which the rights were not segregated, are the subject of lease or assignment and the "water rights" incident to them are still floating water rights.

What we have said of the Salt River Valley Canal Company is applicable to the Maricopa Canal Company.

Shortly after the beginning of the construction of the old Swilling ditch some settlers on the south side of the river,

The drainage area tributary to this reservoir is nearly 6,000 square miles. The proposed height of the dam at this point is 150 feet above the present surface of the river, and it will extend to a maximum depth of 25 feet to bed rock. It will be 365 feet long at the lower water line of the river and 1,250 feet long on top. This reservoir will have a length of about six miles, and a surface area of 3,304 acres, and a capacity of 204,935 acre feet. Estimating the duty of water to be two acre feet to the acre, which is sufficient if irrigation be intelligently accomplished, and we have sufficient water from this reservoir to suffice for 100,000 acres.

Work upon the dam itself has not yet been begun, but the out-let tunnel is completed. This tunnel is 715 feet long and twelve feet in diameter. This scheme is very comprehensive and perfectly feasible, although it may be some years before capitalists can be induced to take hold of the matter again.

About 18 miles below the Horseshoe Reservoir the water is to be diverted from the river by a dam 90 feet high and 475 feet long. Here the canal is to head and will be continued to a distance of 54 miles, a considerable part of the distance being through rough country. At the end of the 54 miles the canal is to be reduced in size to a width of 20 feet and maintained 15 miles further to the crossing of New River. At New River it is proposed to construct another reservoir, partly to impound the storm waters of this stream, and partly to receive the waste waters from the canal. The proposed dam for this reservoir will be 100 feet high, with a top length of 1,800 feet and will impound over 100,000 acre feet of water.

began the construction of a ditch for the supply of lands in the vicinity of Tempe. This, too, was a community ditch and the number of users under it gradually increased. This ditch is now known as the Tempe Canal. It is a voluntary association of the water users, or rather of the shareholders. The interests of the shareholders are represented by one hundred and nine certificates. Each share is the evidence of the ownership of a one hundred and ninth part of the property of the company and of the water diverted and carried by its canal. The affairs of the company are managed after the manner of a corporation, although the association is not incorporated. The shares are assignable and the water rights incident to them are floating and may be used indifferently upon any lands, within the limits of the canal system. The revenues of this company, necessary for operation and maintenance, are raised from assessments against the shareholders. There is no cost to the water user who is also a shareholder, for service except this cost of operation and maintenance.

Intermediate between the time of the beginning of the Swilling Ditch and the Tempe, the construction of the San Francisco Canal was begun. This has been practically a private ditch and is now nearly, if not quite all, owned by the Bartlett-Heard Land and Cattle Company, for the supply of their large holdings of lands.

About 1876, the Mesa Canal Company began its construction. It is a corporation with water rights incident to the ownership of shares. The shares are not appurtenant to land and the water rights are floating. The cost of maintenance and operation is met by assessments against the shareholders.

Shortly after this the construction of the Grand Canal was begun. The Grand Canal Company is a corporation -- there are no water rights incident to the shares of stock. The water right, under this canal, is represented by a deed from the company to the water users and the right is made appurtenant to land designated in the deed. An annual charge is made by the company for the service of water.

In 1877 the construction of the Utah Canal was begun. This is a community ditch, the interests of the members of the community being evidenced by shares of stock to which are incident water rights. The water rights are floating. The cost of operation and maintenance is met by assessments against the shareholders.

The Arizona Canal is a corporation; the water rights are not incident to the ownership of stock. The water rights are evidenced by deeds made by the company to the landowners and are made appurtenant to the land described in the deed. A periodical charge is made to water users for service of water.

The Arizona Water Company owns and controls, directly or indirectly, the majority of the capital stock of the Grand Canal Company, the Maricopa Canal Company and the Salt River Valley Canal Company and consequently controls and directs the management of their affairs.

The cross-cut canal is also controlled by the Arizona Water Company. This canal is a canal constructed from the Arizona Canal to intercept the Grand, Maricopa and the Salt River Valley Canals for the purpose of supplying them with water, diverted by the Arizona Canal at a point higher up on the river than the older canals. Power has been developed on the cross-cut and otherwise

by the Arizona Water Company, whereby electrical power is transmitted to Phoenix for lighting and motive power.

The Highland Canal is a corporation; the water rights are not incident to the ownership of stock but are evidenced by deeds from the corporation to the land owner and made appurtenant to the land named in the deed; a charge is made to the water user for service.

The Mesa Consolidated is a corporation, having a capital stock; water rights are not incident to the ownership of stock, but are evidenced by deeds of the corporation to the land owner and are made appurtenant to the lands described in the deed. A charge is made to the water user for service. Electrical power is developed by this Company which is used for lighting and for pumping water.

It should be stated, here, because it was omitted before, that the Maricopa Canal Company and the Salt River Valley Canal Company make a periodical charge to the water users for the service.

The water rights under these various canals have a market value, varying from twelve dollars and a half per acre, upwards. In addition to payment for the water right the cost of service or the cost of operation and maintenance must be paid. These charges vary from two dollars and seventy-five cents per acre down to as little as, probably, seventy-five cents per acre.

The various canal systems, we have mentioned, are depicted on the map that accompanies these statements.

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Assuming that conditions would be made to prevail which would make the provisions of the National Irrigation Act applicable to our local situation, the water users, last August, publicly called a mass meeting of citizens. This meeting, after being duly advertised, and being well attended by representative water users from under the various canals in the Valley, appointed a committee, from amongst themselves, known as the Water Storage Conference Committee, consisting of twenty-six (26) members. The membership of the committee was apportioned amongst the water users located under the several canals. Subsequently, and at a meeting of this Conference Committee, held on the 4th day of September, 1902, at Phoenix, certain suggestions were made to it by Joseph H. Kibbey, Esq., a local attorney, concerning the applicability of the provisions of the National Irrigation Act to the local situation, and the outlines of plans to secure the aid of the Government in the construction of the Tonto Reservoir (Salt River Reservoir). These suggestions were printed in a local newspaper, and also in pamphlet form, which were distributed amongst the water users. A copy of the pamphlet containing the suggestions of Mr. Kibbey is appended hereto, and is designated by its title. Afterwards this conference committee appointed an executive committee of eleven of its members, fairly representative of the interests under the various canals.

This executive committee had numerous and protracted meetings and formulated a report, embodying in general terms the plans for bringing about the conditions that the National Irrigation Act contemplated to make its provisions applicable.

This report was submitted by the Executive Committee to a well advertised and largely attended mass meeting of the water users, by which it was enthusiastically approved and the Executive Committee was directed and empowered to prepare Articles of Incorporation. The report of the executive committee, was printed in a newspaper, and was also printed in a pamphlet with an address of Mr. George H. Maxwell, which were circulated amongst the people. A copy of this pamphlet is appended to this statement.

The executive committee began its labors in September, 1902, and finally completed the draft of the Articles and submitted them to the conference committee in February, 1903, and this report was approved, but not without objection.

The committee, in preparation of the Articles, kept in view of these principles, believing them to be those and those only on which the people could unite and at the same time accord with the spirit of the National Irrigation Act, viz.:-

1st. The association of all, or practically all, of those who have vested rights to the use of water from the Salt and Verde Rivers, for irrigation.

2nd. That the admitted vested rights are:-

(a) That the basis of an appropriation of water from public sources, for irrigation is the ownership, or the initiation, in good faith, of a right to acquire title under the public land laws, and occupancy thereunder, of land capable of irrigation from such sources.

(b) That the measure and limit of such an appropriation is the beneficial use of the water for the irrigation of the land owned or occupied by the appropriator.

(c) That the right is inseparably appurtenant to the land for which the appropriation was made.

(d) That the rights are severally prior, relatively, in point of time, as in fact the appropriations were initiated.

3rd. That the waters of the Salt and Verde which may be said to have been appropriated, should be under the same rules of distribution and use as those which may be conserved by means of the Government's works.

4th. That, subject to the right of priority, the rules for the distribution and use of water, whether as it would naturally flow if the Government works had not been constructed, or whether stored or developed by the Government, should be uniform amongst all water users, and subject to the approval of the Secretary of the Interior.

5th. That as the relative value of the vested water rights among the several owners have never been ascertained, and as it is impracticable to do so, that the proportionate cost to water users, independent of existing rights, of the Government works should be equal.

6th. That the cost of operation, maintenance and repair should be equally imposed on all shareholders, whether they make constant use of the water or not.

7th. That the powers of administration, (that is: of maintenance, operation, repair, distribution, regulation of use, etc.) should be centralized in the association.

8th. That the exercise of these powers should be as nearly under the immediate supervision and direction of the people as possible, subject to rules and regulations approved by the

Secretary of the Interior.

9th. That the powers of the association should be so distributed, among its agencies, as to impose a maximum of responsibility and a minimum of peculiar personal benefit possibly resultant from malfeasance.

10th. That ample security should be afforded the Government for the reimbursement to it of the cost incurred by it in the construction of its works.

It may be stated, generally, that the framers of the Articles of Incorporation did not particularly concern themselves in speculation as to what the law actually is, locally, as to the acquisition of water rights, or of their nature or extent. If there be any vested rights in the use of water growing out of custom, local legislation or the decision of our courts, that are inconsistent with the principles we have assumed, it was and is the purpose of the framers of the Articles that they should be voluntarily abrogated and abandoned by the adoption of those principles we have herein enumerated. This effectually disposes of the disputes among the water users, reduces the sytem to one of uniformity definiteness and consistency with the principles enunciated in the National Irrigation Act.

All the principles concerning the acquisition of water rights, their extent and the measure and limit of appropriation of water, and the appurtenancy of right to the soil, which we have adopted, are mentioned in the National Irrigation Amt and are taken therefrom. The priority of rights amongst claimants is not mentioned in the Act, but we have assumed that it is, under our laws, a vested right, and therefore one that is preserved from interfer-

ence in the operation of the National Irrigation Act, and we felt that it was right in the abandonment of which it would be almost impossible to secure even practical unanimity of the water users. Hence we have incorporated in the Article of Incorporation the provisions that the right of priority should not be interfered with. To this we will further advert in another place.

As a matter of fact there has been no adjudication in the valley fixing the order of priority amongst the various water users. The principle itself is fairly established by the decisions of the courts, but it has not been specifically applied.

The Articles of Incorporation do not go further than to establish the principle of the existence of rights of prior appropriators; the matter of making specific application of the principle amongst the shareholders, is left either to future agreement or adjudication. The fact that the relative rights of the individual shareholders, so far as affected by priority of appropriation, have not been established does not, we respectfully submit, affect in any wise, either the purpose or the operation of the Association. The rights of priority are individual rights of the shareholders, to be settled amongst themselves; and whatever that settlement may ultimately be, it does not affect the relation of the shareholder, either to the Association or to the Government, or of the Association itself to the Government. To this we will again advert.

We beg to leave to submit therewith, a copy of the Articles of Incorporation of the Salt River Valley Water Users' Association, and to call to your attention the several provisions

embodying the principles upon which we have assumed the water system, when completed, shall be based, and the provisions for making them effective.

The pamphlet herewith submitted containing the Articles, is indicated by its title page.

Reference to our territorial corporation law shows its comprehensiveness, and the absence of restrictions and limitations, and particularly in the manner of procedure.

It needs no further comment then, that it authorized corporations for this purpose, and leaves to the incorporators to determine what powers it will assume, the manner of their exercise, the agencies by which they shall be exercised, the rights of the shareholders amongst themselves, etc.

Articles 1., 11. and 111. of the Articles of Incorporation are formal requisites of the statute, and are self-explanatory.

Article 1V. is a specific statement of the objects of the Association.

Section 1 of Article 1V. specifies the objects of the Association to be; to do any act to procure water for the use of its shareholders for irrigation, and the acquisition of means for that purpose.

Section 2 of Article 1V. specifically authorizes the Association to enter into any agreement with the Government to secure the construction by it of irrigation works; to secure to it payment therefor; and distribute the water according to the rules and regulations adopted or approved by the Government. It is intended by this to authorize the Association to comply with any conditions that may be imposed by the Government upon which it

will construct the irrigation works. It will be noted that the Association may make any agreement with the Government for the collection and payment to it of any and all moneys which may be due the Government for rights issued by the Government. That there may be assurance that the Association may effectively do this, it will be noted by reference to Section 1, of Article XIII, that revenues of the Association are to be raised by assessment against the shareholders. By Section IV. of Article XIII. the payment of dues to the Government are specifically made the subject of assessment; and Section 6, of Article XIII, makes those assessments a lien upon the land of the shareholder. This indirectly, but effectually, pledges the land to the Government for the reimbursement to it of the cost of the irrigation works.

Section 3, of Article IV. defines the territory over which the operation of the Association is proposed to extend. It will be noted that the last clause of this section provides for the extension of this territory to any other lands to which the Secretary of the Interior may issue rights. A map is herewith submitted to show the territorial extent of the proposed Reservoir District. The maps title indicates it.

Article V. relates to the capital stock, its division into shares, and the rights of shareholders to the use of water, the transfer of shares, etc.

Section 1 of this Article (V.) fixes the capital stock at $3,750,000.00, divided into 250,000 shares of the par value of $15.00 per share.

Taking into consideration the best data available concerning the water supply of both the Verde and Salt Rivers, from year to year for a series of years, it has been estimated that with the water storage afforded by the proposed Tonto Dam, and by the

It is then proposed to continue the canal from this reservoir on a grade line across the Agua Fria, around the base of the White Tank mountains and across the Hassyampa, and to utilize another reservoir west of the Hassyampa just above the Buckeye canal near the Four Buttes. The estimated cost of the dam for the Horseshoe reservoir is $600,000. The diversion dam is estimated to cost $200,000, and the canal to the Hassyampa is estimated to cost about $1,200,000, making $2,000,000 in all, exclusive of the two reservoir sites in the plains.

It is estimated that from the head gate of the Agua Fria River the canal covers an area of 125,000 acres of irrigable lands, including a very desirable tract of nearly 50,000 acres in Paradise Valley. West of the Agua Fria the land to be irrigated is an almost unbroken plain of sandy loam comprising more than 125,000 acres above the Buckeye canal and east of the Hassyampa. The magnitude of the undertaking, the natural difficulties to be overcome, and the fact that there are now no settlers within the region to be irrigated, render the prosecution of this scheme a matter of peculiar difficulty.

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TONTO BASIN PROJECT.

This site appears to have been created by nature solely for the conservation of water to be utilized on the lands now under canals in and around Phoenix. The site is just below the junction of Tonto Creek with the Salt River near the line of the Gila and Maricopa Counties, where the

development of subterranean sources, there would be obtained a supply of water sufficient for the proper irrigation of from 180,000 to 200,000 acres of land within the Reservoir District. From our best information we have estimated the cost of the storage works contemplated, at $2,700,000. These figures are merely approximate. Taking the least number of acres capable of irrigation from water obtainable from the natural unobstructed and unregulated flow of the river, from stored surplus water and the subterranean sources combined, to be not more than 180,000, and the cost of the works to be as much as $2,700,000. the cost, per acre, would be just $15.00. As a sum about $15.00 per acre seems to have been generally thought to be the cost of the reservoir and other works, it was thought proper by the framers of the Articles, to take that as the estimate, and consequently, the value of a share. If it were found that more than 180,000 acres could be supplied, the aggregate of the capital stock would appear, nominally, greater than the estimated cost; but, nevertheless, the actual cost per acre for the construction of the Government's works, would still be the cost of each share.

In Section 2, of Article V., it is provided that those only who initiate a reservoir right can become shareholders; and that, at the rate of one acre per share. This was prompted by several considerations. The Irrigation Act provides for an Association of the owners of the lands irrigated by the Government (Irrigation Act, Section 6.) This we deemed to be exclusive of any others; and we further deemed it unwise to associate those together whose interests might be so diverse as to eventually disrupt the Association. Again, to admit others than holders of

rights from the Government might make a speculative or monopolistic combination possible.

Section 3 of this Article (V.) was designated to eliminate from membership those subscribers who purposely or negligently failed to promptly initiate, and thereafter perfect, their Government rights, and those, in the event a greater number of shares are subscribed for than may be authorized by the Secretary of the Interior, to whom shares may not be allotted, as provided in Sections 12 and 13 of this Article (V.). This is a forfeiture clause and its intent is that the Association may exclude certain subscribers, for delinquency, but not that the delinquents may voluntarily suffer the forfeiture and escape the liability. Those to whom shares have not been allotted under the provisions of Sections 12 and 13, of Article V., of course, escape further liability, as their failure to secure Government rights is not because of any default of theirs, but by operation of the selection provided for in Sections 12 and 13, In other words, they receiving nothing in the allotment are not further bound.

Section 4 of Article V. provides for cancellation of forfeited stock. If a landowner should by non-payment to the Government of installments of cost price of the irrigation works, and incur the penalty of forfeiture and the association should enforce its right of forfeiture, then it would happen that there would be water in excess of the needs of the shareholders, because the number of shareholders is diminished. With the consent of the Secretary another landowner, the owner of that or other land, under the provisions of this section (4) may subscribe for stock equal to, and in lieu of, that forfeited. This provides a method of keeping the

membership full and up to the limit fixed by the Secretary of the Interior.

Section 5 of Article V. declares, generally, the right of the shareholder to have water delivered to him for the irrigation of his land. These rights are more specifically stated in the subsequent sections, 6 and 7.

Section 6, (Art. V.) defines the right of the shareholder to stored or developed water. This is, in terms, made a proportionate amount of the stored and developed water. This in practice would be difficult of ascertainment, and likely to be inequitable, if it were possible of accomplishment, under the peculiar conditions existing in this Valley.

The shareholders of this association, or practically all, now have water rights. The amount of water to which they are entitled, however, varies from that to which the oldest water right owner is entitled, (which, while not capable of exact computation, may be said to be nearly sufficient for the proper irrigation of his land) to that to which the last water appropriator is entitled, which in ordinary years is of little importance. Hence to allow to the older water right owner his equal part of the stored water (and developed water) would be to allow him an amount in excess of the "measure and limit" prescribed by the National Irrigation Act; and, on the other hand, to allow only an equal part to the owner of the later right would still leave him short of that "measure and limit". So to adjust this apparent incongruity the provision is made in the next section (7) that the whole amount of water actually delivered, from all sources, shall not exceed the amount necessary for the proper irrigation of share-

holders' lands. In other words the whole amount of water to which a shareholder may be entitled, from all sources, shall not exceed the "measure and limit" prescribed by the National Irrigation Act; that is "beneficial use."

Section 7, of Article V. defines whatever right to the use of water the shareholder has now, and makes that right an incident to his ownership of shares in the association.

Sections 6 and 7 together, then, become definitive of the extent of the water rights of the shareholders.

If the amount of water available from all sources shall be sufficient to properly irrigate the number of acres of land which the Secretary of the Interior shall estimate can be irrigated therefrom, then all distinctions between the rights of the shareholders cease and become of no importance; for the amount of water delivered under the provisions of section 6, plus that delivered under the provisions of section 7, just equal the "measure and limit" to which any shareholder is entitled and of which he could make use.

If this condition can be made to prevail, then the priority of right ceases to be important, for the application of the rule of priorities in times of insufficiency of supply affects, after all, only the quantum of water to which the user is entitled -- it is more or less as fixed by the order of his priority and the amount of deficit in the supply. If, however, by reason of miscalculation or by unanticipated conditions, the number of acres of land estimated to be capable of irrigation should be fixed too high then this deficit will occur, and the distinction between the older and the newer right becomes of practical importance as af-

fecting the quantity of water to which they may be entitled. It will be noted that Article XIV. provides that the right of the shareholder to the prior use of the natural flow of the Salt and Verde Rivers shall not be affected nor interfered with. If, then, there be nothing but "natural flow", or in other words no stored or developed water for distribution, these Articles of Incorporation provide that the natural flow shall be distributed amongst those who have heretofore appropriated it in the order of their priorities of appropriation. The older right owner insists upon this, and the new right owner concedes it, in these Articles of Incorporation.

Section 7 of Article V. makes every right that the shareholder has, whether acquired before he became a member, or by reason of his becoming a member, or from the Government, and the identical shares of the stock of this Association, evidential of those rights, inseparably and perpetually appurtenant to his designated land. This is the rule prescribed by the National Irrigation Act for rights acquired from the Government, and its extension to hitherto acquired rights of the members of the Association, whatever may have been, heretofore, the rule as to them is acceeded to by the Articles of Incorporation. The provisions making the water appurtenant to the land are specific and devised to prevent, by any evasion or indirection, its segregation.

See Section 9 and 10 (Art. V.)

We above called attention to the amount of the capital stock, the number of shares, and the reason for fixing them, as they appear, in the 1st section of this article.

Section 11 of this Article (V.) provides that no payments for the capital stock shall be required except by the payment to the Government, by the shareholder, of such sums as may be due to it, from time to time, in reimbursement to it of the cost of the construction of the proposed reservoir and other irrigation works. As the shareholder has one share of stock for each acre of land for which he has initiated rights to the use of water under the provisions of the National Irrigation Act, the amount of his liability on account of capital stock is the proportion that the number of his shares (and, consequently, acres of land) bears to the whole number of shares issued, which is the whole number of acres estimated by the Secretary of the Interior to be capable of irrigation from all sources. Fifteen dollars, as before suggested, is the estimated cost per share (or acre); but whether it prove to be more or less, its payment to the Government pays for the stock. There is no chance that there can be an excess of liability, against the shareholder on this account, over and above the cost per acre of the works constructed by the Government, for the payment of that cost (per acre) discharges the liability on account of capital stock, nor can the liability be discharged, if the cost should exceed the estimate, because the stock is not paid up until the cost of the works are repaid to the Government. The liability of the stockholder, on this account, by this provision, adjust itself to the actual cost of the reservoir.

If the actual cost per acre shall be found to be less than $15.00, the liability on account of capital stock is nevertheless discharged by the payment of that cost -- if it should exceed the estimate of $15.00 the obligation of the shareholder con-

tinues until the payment of the price in excess of that sum.

As the entire purpose of the Association is to acquire water and the means of its distribution, for its shareholder at actual cost, and every notion of investment for profit is excluded, so every method of raising funds provided in the Articles is limited to the necessities for that purpose. Hence, while the capital stock is fixed at a definite sum, divided into a definite number of shares of a stated par value each, yet the method of determining (by the Secretary of the Interior) the number of shares to be issued as provided in Sections 12, 13 and 14 of this Article (V.) and the manner of paying for the capital stock prescribed by Section 11, now under consideration, will, in its operation, result in making the capital stock equal to the actual cost of the reservoir and the liability of the shareholder therefor, the proportion of that cost that the number of shares issued to him bears to the whole number of shares, whether that be more or less than the nominal liability fixed by Section 1. The provisions, in their operation, make their own adjustment to this end.

Under our law, as our Articles of Incorporation are framed, there can be no further liability, present or contingent, on account of capital stock, than as we have explained.

Sections 12, 13 and 14 of this Article (V.) are designed, as they disclose upon reading, to limit the number of shares, that may be issued, to the number of acres that the Secretary of the Interior may determine to be capable of irrigation from present sources of supply and from the increased supply made available by the contemplated reservoir and development of subterranean sources.

No greater calamity can happen to a community dependent upon the artificial application of water to the soil for its productiveness, than the attempt to, or in fact, to distribute the available water supply over too great an extent of land. Whenever the supply of water to any given piece of land falls below that necessary for its proper irrigation, disaster must necessarily result. A growing crop will certainly be more or less damaged, and it may be wholly lost; and the damage or loss is increased 10 or 20 fold if the land be in fruit or vines. And if this deficiency be general throughout the community the damage and loss is multiplied by the number of that community.

While the loss of a crop of grain, or a cutting of hay, might be occasionally borne, the loss of an orchard or a vineyard, representing the investment of years of labor and of large capital cannot, if it be general, be borne by the community, or if it be isolated, by the individual.

We do not presume to outline to the Secretary of the Interior the rules that should govern the estimate to be made by him of the number of acres of land in this valley that can be supplied with water from all sources, present and contemplated; but we feel justified, in view of the importance of the subject, to make some suggestions for his consideration.

The elements to be taken into consideration in determining the number of acres of land in the Salt River Valley that can be irrigated with its natural flow and heretofore accustomed supply and from the added supply made available by the contemplated Governmental works, are very numerous, and are variable within large limits.

The supply is dependent, of course, primarily on the amount of rainfall upon the shed tributary to the valley, This is variable, not only with the different seasons of the year but varies from year to year. This variation in no small degree depends on the changing conditions throughout the water shed by the denudation of the forests and other vegetable growth. This operates possibly to diminish the amount of rainfall -- it does accelerate the delivery of the rainfall to the water courses and its consequent rapid accumulation in floods beyond the capacity of the ditches to carry them or present need of use, and their consequent waste. This waste will, in a measure, be prevented by the storage reservoir, but only a portion of the rain shed drains into the reservoir. This denudation seems to be progressing, with its consequent increase of waste water.

That the supply of water that can be made available is variable is obvious.

To take the rain fall of any given year as the basis of supply would be hazardous. To take the average of a series of years would be a nearer approach to safety, but it is still not reliable; for 2 or 3 successive years of deficiency of supply below the average would be ruinous to perennial growths, although the average of the whole series might remain undisturbed. The supply, we would suggest, ought to be estimated to be the supply that there may probably be made available, under the most favorable conditions at the time of need for its use.

The elements to be considered for the determination of the needs for water are also numerous, complex and variable.

In this valley there are several qualities of soil, requiring varying quantities of water for the same character of crop. Different crops require different quantities of water.

The difference of the season of the year during which crops are grown greatly modifies the needs of the soil for irrigation as affected by, among other things, evaporation which increases, of course, with aridity. Some crops grow during the greater part of the year.-- others require water only a part of the year. Some are grown when the supply of water is the least and the loss by evaporation the greatest -- others when the supply of water is abundant and the loss by evaporation is at or near the minimum.

In practice, in this valley, hitherto, the greater part of the products of the soil are those grown and matured while the supply of water was fairly abundant and the loss by evaporation comparatively slight; but the possibilities of soil and climate are such that the productiveness can be enormously enhanced by the growth of vines and trees, which require water when the supply, heretofore, has been at the minimum and the loss by evaporation the greatest.

Regularity and certainty of supply are important elements to be considered. If water can be supplied to meet the wants of plants, promptly, as the demand arises the aggregate quantity applied to the soil need be greatly less than where the supply is irregular and uncertain.

In this valley the uncertainty and irregularity of the supply results in the application of much larger quantities of water than are necessary to promote vegetable growth. When water is plentiful the practice is to flood the lands, and this may be,

Salt River passes through a deep narrow gorge of solid rock. Above this rock both streams flow through wide valleys which are settled and cultivated to a considerable extent.

The Hudson Reservoir and Canal Co. has made surveys and estimates contemplating the situation of a dam at this point about 215 feet long on top, which it is claimed will give a reservoir capacity of over 800,000 acre feet. Several lines have been surveyed for a location of a canal to conduct these waters to irrigable lands on the south side of the river, and it has been shown that by diverting the waters well up in the canon of the Salt River, they can be delivered high enough to water a large tract of land at present not under canals, and to irrigate the greater portion of the valley lands on the Pima Reservation. This involves a large amount of costly construction in the canon. Large tracts of uncultivated land are already under existing canals, especially the Arizona, the Mesa Consolidated, and the Highland Canals.

Many of the older canals have also under them considerable tracts of uncultivated lands for which they hold no water right, and whatever waters are left, after supplying all these demands can be distributed from the line somewhat higher and parallel to the Highland canal without involving much heavy construction.

Here let us quote from a description of this project by Engineer Davis who investigated the matter thoroughly in 1897 under the auspices of the U.S. Geological Survey.

and generally is, at a time when plant life is practically dormant. Of this water so supplied, some is absorbed by the soil and retained for the future use of the plant growth, but for the greater part it is lost by evaporation and wasted. The practice has other objectionable features.

The methods of cultivation and irrigation, too, are important considerations -- some methods of both cultivation and irrigation being extremely wasteful of water.

One of the purposes of the association will be to compel the adoption and practice of economic methods of cultivation and irrigation of the soil, and as well of the carriage and distribution of water to the place of use.

Certainty of water supply is probably the chief element that can promote the prosperity of our people, by inspiring confidence, by encouragement to effort, and by prospective certainty of profitable results. Uncertainty of water supply can but have the opposite effect. The product of a less extent of land with a certainty of water supply to meet its needs will inevitably exceed that of a considerably greater extent of land with an uncertain water supply.

Safety then suggests that the estimate of water that may be available should be so made that its quantity will always be determinable with reasonable certainty in advance of the necessity for its use, and that the estimate of the amount of land that may be irrigated be so fixed that the supply for the necessities may, with like reasonable certainty, be counted upon.

The fault of nearly all irrigating enterprises has been in making the estimate of the supply of water and of its duty, too

high. The result has been discouraging and often ruinous. If the estimates should, in the future, prove too small, and a surplus of water be found available, no evil results follow, for the surplus can never, under the conditions prevailing here, exceed, or ever nearly equal, the demands for it. Dealing with a surplus presents no difficulties -- indeed it would be a pleasant prospect. On the other hand there is no easy remedy for a deficit, if there be any remedy at all.

It will be noted from what we have said that the matter of the extent of land which shall be covered by water from all sources is left to the determination of the Secretary of the Interior and cannot be extended without his express approval. And it will also be noted that the rules and regulations for the distribution and use of water which are to prevail over the entire extent of land covered by the proposed operation of the association are to be such as the Secretary of the Interior shall approve.

Article VI. provides for the distribution of the powers of the Association amongst its various agencies.

These are the:

Council, Board of Governors,

Local Boards of Water Commissioners, and

Certain Officers.

This Association will have from 2,000 to 3,000 individual shareholders -- perhaps as the diminution in size of holdings continues, as it is desirable that it should, a much large number. It is wholly impracticable that so large a number of people should meet and attempt the transaction of business. For many reasons, obvious enough, it was not thought desirable to introduce into the

plan of this Association the practice usually prevalent with the management of corporate affairs; that is, the delegation of authority by proxy, by many shareholders, to a few to act at a stockholder's meeting.

These considerations led us to practically delegate the legislative powers of the shareholders to a council to consist of a number small enough for convenience, promptness and efficiency and yet large enough to be representative of all the shareholders, and dispense with the impracticable (in this instance) stockholder's meeting. The council consists of 30 members, three from each of ten districts into which the land within the operations of the Association is to be divided. The term of office of the councilmen is 3 years, and the terms are made to expire so that one-third of the whole number (1 in each district) are to be elected each year.

Councilmen must be shareholders of the district they represent and be elected by the shareholders of those districts respectively.

The council is required to meet at least once in each year and special meetings are provided for.

The councilmen serve without compensation and are ineligible to any office in the Association to which any emoluments are attached for at least two years after the expiration of his term of office as councilman. This inhibition does not apply to members of the first council, as it was deemed, inasmuch as the affairs of the Association were yet in the formative state, it might be desirable to elect some to office who, by reason of their knowledge and experience acquired during the formative

period, were best qualified for the office.

(See Sec. 12, Article VI.)

Section 13 of this Article (VI.) confers general legislative powers on the council. The council is limited, however, by the provisions that it shall pass no by-law that shall conflict with any rule or regulation of the Secretary of the Interior for the administration of water from the reservoir.

This limitation is by its terms confined to the rules of the Secretary of the Interior relative to the distribution and use of water from the reservoir or other works constructed by the Government or in the construction of which it aided, and used in the supplying the shareholders with water.

As the water, to be supplied by works constructed by the Government, and the water now subject of appropriation is all to be either impounded in the reservoir or finally distributed through ways for distribution under the control of the Association, and practically no distinction observed between the two classes, it is intended that the rules and regulations for the distribution and use of all water, whatever its source, to which the shareholders are entitled, shall be uniform and constitute one system regardless of any distinction, subject of course to the one vested right of priority of right in the natural flow which is reserved. These rules and regulations must then, of course, be subject to the approval of the Secretary of the Interior.

It is not contended that there can be any priority of right of use of water which has not heretofore been appropriated. Whatever water is made available for use by the Government works and which has heretofore been allowed to waste unappropriated is

subject to the rules of the Secretary of the Interior.

Whatever rules the Secretary may make, from time to time, for the use of that water, must prevail. It must be assumed too, that they will be satisfactory to the Association and for the sake of uniformity those rules will be adopted by the Association so that the distribution and use of all the waters available for use by the shareholders will be uniform, and the rules will be those approved by the Secretary of the Interior.

The theory on which the framers of these Articles have proceeded is, that all the water in addition to that which is now available for use by the water users of this valley, and actually appropriated, which the Government, by its works makes available, and as well that so heretofore appropriated, constitute a common stock for the use of the shareholders.

It is almost impossible to ascertain what amount of this common stock has, in fact, been heretofore appropriated by the water users, (shareholders) and consequently the additional amount that may be made available by the Government is indeterminable.

In fact the amount of water heretofore appropriated in this valley has never been established either by adjudication or by any agreement. (Note:- In the Wormser case referred to in an earlier part of this statement, the court undertook to find the <u>time</u> of appropriations of water for lands in the valley, but not the extent of the several appropriations. It would appear that appropriations has (have) been made aggregating an amount largely in excess of actual use. This is due to the fact that lands for which even only an occasional use during flood time were taken in-

to consideration as having some rights. The statement that the amount of water appropriated has never been adjudicated is not affected by the Wormser case. K.) It is an unknown quantity -- until that can be known and established the additional quantity made available by the Government works must remain unknown and unestablished. But it must be assumed that the storage of water that heretofore ran to waste, and the regulation of the admission to the soil of water heretofore wastefully applied to it, and other savings due to better and more economical service, will increase the common stock. And, as such common stock, we have accounted it the subject of common use, with equal benefit to all, and therefore, subject to common rules for its use and distribution.

It is upon this theory, and upon this theory only, that it can be estimated that 200,000 acres (tentatively it does not matter what the exact number may be) of land can be irrigated, and that the Government may authorize the issue of reservoir rights for that number of acres and the Association issue its shares with their incident rights at the ratio of one share for the like number of acres. Neither the water conserved by the Government nor that heretofore appropriated by the water users alone, is sufficient to adequately irrigate 200,000 acres of land -- but combined they are. The relative proportion between the two has been ignored for it is unimportant under the plans proposed. And the plan proposed renders unnecessary the difficult, if not impossible, task of ascertaining this proportion.

It is upon this theory, too, that the water users propose the combination, and authorize the Association (by Sec. 2 of

Art. lV.) to enter into any contract with the Government to secure its action or aid in the construction of the reservoir and assume such conditions as the Government may impose therefor.

So that the plan in its ultimate operation must, in practice, conform to the rules and regulations of the Secretary of the Interior and those rules and regulations are a limitation upon the powers of the Council to make, amend or repeal by-laws.

Article Vll. prescribes the qualification of electors. As was suggested before, the proxy feature of corporations is eliminated. The shareholders must cast their ballots in person at the polling places provided for that purpose.

Article Vlll. defines the powers of the Board of Governors. They are, generally, analogous to those of the Board of Directors in ordinary practice. The members are elective. There are 11 members, one for each of the ten council districts, and the president is one by virtue of his office.

The compensation of the members is fixed by the council, as well as are the salaries of the other officers.

Regular meetings of the Board are provided for and special meetings may be called. The Board of Governors has the immediate management of the affairs of the Association.

Article lX. is designed to secure to the water users (shareholders) as much of the local control of the various canal systems as is consistent with the absolute and paramount control of the Association itself.

It is obvious that rules concerning the use of water and its distribution to enforce economy in its use are necessary.

Others are necessary to secure to the individual shareholder full enjoyment of his right and at the same time limit him to that. It is of common observation that where the observance of a rule requiring active effort, or expenditure of money, and having for its only object the preservation of the rights of a distant neighbor, and the enforcement of that rule, is left with the one upon which it is imposed usually fails of observance.

As the successful operation of the business of the Association depends upon the establishment and the enforcement of these rules to secure to each of the shareholders the fullest enjoyment of his rights, and that, too, without discrimination being either permitted or practiced, so that all may have the common benefit, and that the rights of some may not be infringed by the laxity of others, the establishment of these rules and their enforcement cannot be safely delegated to subordinate Associations or divisions whose active interest is limited by the bounds of the local district.

This Article IX. has gone as far in the direction of local control, as distinguished from the centralized control of the Association, as we deem consistent with safety.

To carry out the purposes of the Government, the Association must be cohesive, the powers must be adequate to enforce the rights of all its members and it must have the means of the exercise of its powers.

To vest local boards with any of these powers to the exclusion of the central Association necessarily renders the Association weak, insufficient and practically useless. It would

promote discord, strife, and disputes if there should exist or there should thereafter arise differences in interest. And if there be no difference in interest, as there should not be, or none can arise, the reason for taking away from the central Association the powers necessary to its effective existence disappears. To this subject we will again advert.

Article X. relates to the powers of the various officers. They are those usually incident to such officers and we think need no special comment or explanation.

Article Xl. provides that the council may create offices, and provides for their incumbency and compensation.

Article Xll. provides for the removal from office of incumbents for causes enumerated.

Article Xlll. To this article we have had occasion heretofore to advert.

Section 1 of this Article (Xlll) states the source of revenue of the Association. It has no other.

Section 2 confers upon the council the powers to make and enforce by-laws for the enforcement, etc. of assessments.

Section 3 (Article Xlll.) provides that the assessments for the ordinary cost of operation, maintenance and repair of the works of the Association, or of those with the maintenance of which it is charged, shall be equally assessed against all the shareholders in proportion to the number of shares held by them respectively.

As we have before said, we have proceeded on the theory that the water to be distributed by the Association is a common

stock of the shareholder, to which they have equal right to resort, and from which they will derive a common and equal benefit. It might under certain circumstances be that the actual cost of service to the various shareholders should vary and not be equal. As the benefit is common and equal it is desirable and equitable that the cost should be. That it might, in fact, be unequal is true, but we know of no rules by which to measure the inequality, nor any in practice that fairly approach it.

With the purposes of the Association accomplished we would have the owners of 200,000 acres of land in this valley taking water from a common source, with an equal right to it, taking of it in proportion to the number of shares held by them and deriving a common benefit from it. If each individual landowner was required to supply and maintain for himself his own separate means of diversion of water from the common source and its conveyance to his land, we might approximate the cost to each, and hence the relative cost. We might then take into consideration the distance of carriage as the chief element in the difference in cost, and that the relative cost would be in proportion to this distance. That the owners of the sources of supply would pay little or nothing, the owner a mile away the cost of the construction and maintenance of a new ditch, the one ten miles away ten times as much, etc., etc.

That there would be a diminution of cost to all if they united in the construction and maintenance of one ditch for common use is probable. But we do not believe that the cost of either construction or maintenance of one ditch for common use is

"It would probably be impossible to find anywhere in the arid region a storage project in which all conditions are as favorable as for this one. The capacity of the reservoir in proportion to the dimentions of the dam is enormous. The lands to be watered are of remarkable fertility in a climate which may be classed as almost semi-tropic, and are vastly greater in area than the water can supply. To a considerable extent they are already settled upon and the water is in lively demand. The character of rock at the dam site is said to be excellent for the construction and foundation of the dam. There is tributary to this reservoir about 5,756 square miles of mountainous country ranging in altitude from 2,000 to 12,000 feet, and include some of the best drainage area in Arizona.

"Many of the tributaries of the Salt River find their source at the foot at the bold escarpment of the Mogollon Mesa.

"Tonto Creek, for instance, heads at the foot of this Mesa with the volume of a very considerable rivulet within a few hundred yards of the divide. Such streams evidently obtain considerable water supply from the precipitation which falls north of the divide.

"These facts indicate that the water shed tributary to this reservoir is not only large, but favorable to a high percentage of run-off. It is doubtful, however, whether the immense reservoir capacity above referred to could be filled in the dryest years, and what proportion of its capacity should

probable. But we do believe that the cost of either construction or maintenance would thereafter be apportioned among the users according to their respective distances from the common source. The more equitable rule is not that each shall have his proportionate part of the benefit of the diminished cost, but it shall be equalized if the cost is not increased to any.

Equality of assessment for operation may seem, if considered alone, arbitrary and possibly not equitable, but it is certain and definite. If the rule were that the cost were to be apportioned equitably, it would become uncertain, and dependent upon discretion with no rules to guide the discretion and hence arbitrary. Being both, uncertain and arbitrary and varying it would become inequitable.

With conditions so nearly identical in this valley there is no good reason why the cost of the delivery of water under the various existing systems should not nearly approach equality.

That differences do exist is due to causes that will disappear when the Association is in operation. The chief cause of difference is that the number of users under the several canals are not equally proportionate to the magnitude of the canals -- some of the larger canals having fewer users, who bear the cost, than there are under some of the older but smaller canals.

It may be confidently expected that when the canals are all under one management that the facilities for maintenance, operation and repair will be so increased, and be so much more efficient that the cost of service to all will be reduced.

But aside from the impracticability of any rule other

than that of equality of assessment for maintenance, operation and repair, there is another and more important consideration that leads us to avoid the uncertainty of any other than that of equality.

If "equitable" assessments were prescribed, the matter is at large to be determined from year to year by different boards with differing views as to what would be equitable,

One board might think it inequitable to assess a shareholder who does not use water during a given year -- and possibly with some show of reason. But the Association thinks otherwise. The Association deems it just that the non-user should bear his equal share of cost of maintenance, operation and repair. Otherwise the burden upon users might be unjustly increased by the mere default of the non-users. The Association is of the further opinion that the indirect penalty involved in the requirement of the payment of an assessment by a non-user will discourage unproductive holdings. Again, if by unfortunate chance the supply of water become insufficient for all, in that event as in the case of voluntary non-users, the cost of operation, maintenance and repair is not lessened, yet some board, not governed by any rule, might deem it equitable to assess the shareholders who receive less, and the shareholders who receive more water, more, introducing again an element of uncertainty and most probably of injustice. Taking these all into consideration, the equality of assessment for maintenance, operation and repair seems to the association the most desirable rule to adopt. Hence its adoption.

Section 4 of this Article (XIII) taken in connection

with Sec. 2 of Article V. authorizes the assessment of the cost of the reservoir and other works constructed by the Government.

Section 6 of this Article makes all assessments a lien on the land -- we have before shown that this operates in favor of the Government under the provisions of Section 2, of Article V. and Section 4 of this Article.

Section 6, as we have noted, makes the assessments a lien on the land. It needs no argument to show that the power of assessment is a useless one unless it can be enforced. The suggestion that the lien might be made on the stock is inconsistent with, and subversive of, the whole plan of association. One of the essential features of the plan is the inseparable appurtenance of the stock (and its incident rights) to the land. This is, too, one of the cardinal principles of the National Irrigation Act. To make the stock alone subject to a lien and to enforce the lien by a sale is at once to work a segregation of the water (incident to the stock) and the land. It, in short, opens the door to the worst evils against which we have attempted to guard.

Section 7 of this Article inhibits the expenditure, by the Association, of a sum exceeding $50,000 dollars or the creation of a debt for that amount in any one year, except for maintenance, operation and repair, except with the consent of two-thirds of the shareholders.

Article XIV. we have adverted to.

Article XV. is self-explanatory and so of Article XVI.

The statutory limit is the one fixed by Article XVII.

COMMITTEE OF NINE (OR ELEVEN)

The big drought started in the early 90's and extended into 1903, practically ten years. The valley in the meantime was in a very critical situation, in that there was not nearly enough water to take care of thousands of acres of land and at one time the total available water for irrigation in the river, measured less than 800 miner's inches. Finally, the situation became so desperate that many districts throughout the valley called meetings at which were selected delegates to a general committee to assemble at Phoenix. This committee consisted of thirty six delegates, selected from all sections of the valley and after several days discussion, a permanent committee was formed to devise ways and means to meet a new condition in National affairs, which was the Reclamation Act, then under discussion in Congress.

From the original committee of thirty six, eleven men were selected, nine of whom held many meetings, two of the members, however, gave little time or attention to the discussions. The following are the names of those who constituted the committee:

William Christy, Phoenix,
B. A. Fowler, Phoenix,
D. B. Heard, Phoenix,
Frank T. Alkire, Phoenix,
W. H. Wallace, Mesa,
J. W. Woolf, Tempe,
H. Simpkins, Lehi,
F. H. Parker, Phoenix,
M. A. Stanford, Phoenix,

and two others, who but seldom attended the meetings:

A. J. Chandler, Chandler,
C. S. (Jack) Stewart, Mesa,

On organization, B. A. Fowler was elected Chairman and F. H. Parker, Secretary, with Joseph H. Kibbey as Attorney, and George H. Maxwell, Reclamation Advisor.

These meetings continued for practically a year and a half. The result was the constitution of the S. R. V. W. U. A. and its By-Laws. Then the committee took up the work of signing up the farmers after the association, constitution and By-Laws had been adopted. So that the years from the fall of 1900, 1901 and 1902, were used in the endeavor to get a substantial foundation, whereupon the organization was perfected the 2nd day of February, 1903, and the Secretary of the Interior so notified. A little side light -the original Reclamation Act did not provide for public lands and lands in private ownership to be taken care of under the same project, whereupon George H. Maxwell, was furnished the means by a few of us, to go to Washington and lobby for this object. He succeeded in inserting in the original Act four words "AND LANDS IN PRIVATE OWNERSHIP" which took care of our local situation.-

These facts after thirty years, are as they were fully impressed on my mind. The other eight members of the committee have long since passed on to their reward and I am the only one remaining of the nine who can give an outline of the work that was done.

Phoenix, Arizona.
August 21, 1933.

Articles XVlll, XlX and XX are self-explanatory.

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A complete list of the subscribers with full information, their names, acreage, together with a map in colors, showing what lands had been subscribed, a copy of the articles of incorporation, a copy of the by-laws: All of this having met with the approval of the Secretary of the Interior, the preliminary work of construction was begun by the reclamation service in the fall of 1903, and the first major contract - that for the building of the power canal - was signed by the Secretary of the Interior in March, 1904, and after that the work was carried on to the final completion of what is now known as the Roosevelt dam.

be held as a reserve for years of minimum run-off cannot be determined exactly without a longer series of measurements of the discharge of the Salt River, between the mouth of the Rio Verde River and the mouth of Tonto Creek. Such measurements have been roughly carried on for over a year by the Hudson Reservoir and Canal Co. There can be no doubt that in this reservoir site lies one of the most important possibilities for the future of agriculture in southern Arizona."

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THE BUTTES RESERVOIR.

This site is situated about 14 miles east of Florence, where the Gila River passes between two buttes, locally known as "The Buttes." It has long been proposed to construct a dam at this point to store the flood waters of the Gila River for the reclamation of the arid plains below. This reservoir will have a capacity of 200,000 acre feet, and the rain fall seems to be sufficient to warrant the assertion that 75,000 to 100,000 acres can be reclaimed by waters stored at this point. The estimated cost is something over $2,000,000.

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THE LOWER GILA STORAGE RESERVOIR.

This project contemplates the construction of a large dam on the lower Gila in the gorge below Oatman and Cottonwood flats, not very far from the railroad station of Sentinel. So great diversity of climate and topography is embraced by the drainage tributary to this reservoir, that it is likely that it

would receive a large runoff available for storage for irrigation, and very materially increase the area reclaimable, after all reservoirs in the upper portion of the basin are utilized. Work on this reservoir was begun in 1892, but was postponed the next year, owing to financial difficulties.

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FUTURE DEVELOPMENTS.

As we have heretofore stated, further development of irrigation in Arizona by the simple diversion of water from the natural streams is impossible, it being a fact that the dry weather flow of those streams is over appropriated. We can increase the area irrigated only by more economical use of the water now at hand, by the development of under ground sources, or by storage of flood waters.

Southern Arizona has vast areas of land of surpassing fertility, admirably situated for irrigation, and with a climate, the dryness and warmth of which make it exceptionally healthful and marvelously productive. Without water these lands are utterly valueless, consequently, the question of increasing our water supply is the one matter before all others requiring earnest thought and consideration. In some respects the topography and climatic conditions in Arizona are favorable for the complete utilization of its hydrographic possibilities. Probably in no other section of the country are such excellent reservoir sites so favorably located for the conservation of the storm and winter waters and melting snows.

These conditions seem to apply not only to the location and great capacity of the reservoir sites, but to their engineering practicability.

Being convinced of the utter impracticability of further expansion of agricultural and industrial interests in southern Arizona, without a largely increased and permanent water supply, the question naturally follows. "By what means are we to obtain the desired relief?"

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PLANS FOR RELIEF.

There seems to be four ways open and possible, namely:

1. By direct federal appropriations.

2. By ceding the Government lands to the respective states and territories.

3. Private enterprise and capital.

4. The voting of bonds by the county.

Each of these methods has its supporters and defenders. It would appear that it is just as much the business of the Government to construct irrigation works as it is to build harbors, or dykes and dams to confine rivers to their ancient beds. All are questions of national economy and importance. Indeed, it would seem that both the salvation of the arid regions and the confinement of mad rivers might be combined and regarded as the focus of centralized thought and effort. Both questions could be solved at once by the construction of vast reservoirs at the head waters of the annually destructive streams. These would impound the dangerous

element and control it for future uses, both of navigation and irrigation.

Suppose, for instance, the flood waters of the Missouri and its tributaries were held in leash and let out in quantities sufficient for navigation, there would be no more danger of over-flow to the inhabitants along the Mississippi River. Instead of months in the summer time when navigation is impossible, as now, there would be sufficient water at all times for ordinary river craft. This fact would lessen freight rates, increase the value of land and subdue the annual fear of terrible washouts. Besides, there would be water enough to irrigate all the arid lands in Kansas and Nebraska, thus transforming their miles of desert into gardens of profit and beauty. The waters held in check would form a great inland sea, with its blessings of more equitable temperature, cheaper transportation, etc.

This Government has a most valuable precedent for the construction and control of irrigation projects in this country in the measures taken by the British Empire toward improving the condition of its India possessions.

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HOW ENGLAND DOES IT.

Since the British have had control of India, irrigating works have been constructed on stupendous plans. The hydraulic engineering vies with the best in the world, and no longer is irrigation precarious, for the streams and storm waters are controlled by the highest human art.

In that country, according to the recent statistical reports, $360,000,000 have been invested for that purpose, and more than 35,000,000 acres of land have been reclaimed during the last thirty years. The problem of irrigation in India command the brightest imperial statesmanship. They involve the humane government of a dependent and conquered population of over 50,000,000 of people. They involve the feeding of vast communities heretofore ever liable to the horrors of famine. They mean the reclamation of vast tracts of land otherwise unoccupied, and the creation of a vast revenue from land rent to the Government, which is practically the sole landlord in that great Empire.

The greatest of all these works is the Ganges canal which cost $15,000,000, and controls 10,000,000 acres, of which 1,000,000 acres are irrigated. It has 486 miles of main canals, 2,599 miles of tributaries, 895 miles of escapes and drainage cuts, and its total mileage is 3,910. Each tributary would be a large canal in America, and has enormous masonry bridges, regulators and aqueducts in its line.

In addition to the Ganges, and almost as large, is the Sirhind canal in Punjab. The main canal and principle branches are nearly 5,000 miles in length. The greatest area commanded by the canal is nearly 5,000,000 acres of which 800,000 acres are irrigable.

These canals are built so large that they not only serve for the purpose of irrigation, but also of navigation. The total length of canals and tributaries including the

larger irrigation works, amounts to about 88,000 miles, and about 3,000 miles are navigable.

According to official reports there were in 1890 under cultivation in India by means of irrigation, about 35,000,000 acres. Thus in a thickly populated country, scorched by the tropical sun, the famine days a e fading away before productive fields.

Other countries such as Italy, Spain, France, Australia and Africa are spending millions and millions upon great irrigation works.

The prospects, however, for an immediate favorable action in the premises by our Government are not worth considering. The construction of irrigation works has not yet become an imperative necessity, as it has in British India, for instance, where without the means for irrigating the desert lands famine would be rampant. Moreover, while many members of both Houses see the wisdom of spending Government funds in the promotion of this great economical measure, there are yet a great majority of Congressmen who are either not great and broad enough to grasp the grand statesmanship of this problem, or are too busy with personal or partisan politics to undertake any such praise-worthy scheme.

Legislation in these latter days is either partisan, being forced to conclusion by one of the great parties, or a compromise between what should be and what may be. It appears to be useless for the people most interested to wait for the slow movement of the Government in this matter. The dilatory tactics employed by our Government representatives

water in the river, diverted by canals which have their heads at such points in the river, nevertheless additional land lying to the westward, not covered by the ditches aforesaid, is irrigated by means of ditches which have their heads in the river below the Joint Head. This is made possible by the peculiar conditions which obtain in the river whereby, though dry above, water rises in the channel of the river below, forming a new source of supply independent of that diverted above. Such additional land and the relative rights of such land or the owners thereof to water for irrigation purposes are not included within the issues of this suit.

The canals serving the land embraced in this suit lying to the north of the river are the Salt River Valley canal, the Maricopa, the Grand, and the Arizona; those serving land embraced in this suit lying to the south of the river are the Tempe, the Broadway, the San Francisco, the Utah, the Mesa, the Highland, and the Consolidated. A general map showing the river, the land in question, and the means of diversion thereto of the water supply, is attached hereto, marked Map No. 1.

Of the canals on the north side, the canal now known as the Salt River Valley Canal is the oldest of those now in service; it was commenced in the year 1867 and was originally known as the Swilling ditch. Its head was at a point about five miles east of the present site of the City of Phoenix. The slope of the land on the north side of the river being generally to the southwest, this canal in general serves the land lying to the south and west of its course - approximately 18,000 acres.

in the matter of international cable lines and the Nicarauga canal is enough to convince us that the present generation will not live to see the accomplishment of their desires in this matter.

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CEDING OF GOVERNMENT LAND TO THE STATES AND TERRITORIES.

Opponents of the plan for direct federal aid favor the ceding to the several states and territories the government land within their respective boundaries. The people then, acting through their legislatures, could sell these landed donations and use the funds thus obtained for the building of irrigation works.

While this plan has its supporters, and while it is possible that the accomplishment of the desired end could be secured by such means, still this proposition is open to the same objection as that just stated against the federal aid proposition; that is, that if we wait on the Government to take the initiative for our relief, we may, perhaps, in the course of a generation or two, look down from above on the beginning of the undertaking.

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PRIVATE ENTERPRISE AND CAPITAL.

The third proposition is the construction of these irrigation works by private enterprise and capital.

Much preliminary labor has already been done on each of the above mentioned reservoir sites, but work has been discontinued on all now except that in Tonto Basin. The

completion of this project is that directly concerns us, as this reservoir, when completed, will have a capacity ample for the irrigation of all lands now under existing canals, and enough more to reclaim an additional 200,000 acres. It would seem that the scheme is bound to become an accomplished fact in a short time, for, while its construction will require an expenditure of $2,000,000, or more, a comfortable and permanent income awaits it from the start. It will furnish water to a large and eager constituency. The existing canals have contracted to pay $300,000 per year for their product. Not having to depend on the sale of land and water rights for its income, but being assured before active work is begun of quick and prompt returns on its investment, it would seem that the promoters of this scheme would be eager to see the dam completed, and they assure us that such is the case, yet years, have passed since its inceptien and no tangible results are in evidence.

It has been stated that the existing canals have contracted to pay $300,000 for the product of this reservoir. This means, of course, that these canal companies intend reimbursing themselves by a charge of an extra dollar per acre for water. We are now paying $1.25 per acre. This extra dollar will make $2.25 per acre for water. According to this proposition, the canal companies are giving nothing while the people are paying a bonus of $300,000 to the reservoir company. This, of course, the cultivators of the land can well afford to do, yet it is a question whether this plan is the best way out of our present difficulties. The reservoir

company has already been aided greatly by an act of the last legislature exempting it from taxation for a period of years.

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VOTING BONDS.

The fourth proposition is to bond the county for funds sufficient to purchase and construct suitable reservoirs. It would seem that the last proposition has many points in its favor over any of the others. The ownership and control would be in the hands of the people directly concerned. No high salaries need be paid and the expense could be kept at the minimum. The executive officers could be elected for short periods and their tenure made entirely dependent on merit.

If any corporation has the control of our water supply, we may rest assured that the people will be required to pay about all the traffic will bear. Our rents will never be less than they are now no matter how many acres are under cultivation, nor how large the profits accruing to the corporation.

Corporations are not given to lying awake nights devising ways and means for alleviating the conditions of its patrons.

Business acumen and sagacity would at once suggest the bonding of the country for funds sufficient to purchase outright not only the Tonto Basin reservoir site, but the existing system of canals, provided they can be purchased at a reasonable figure.

The only objection to this plan is its enormity. The canal companies claim to be willing to dispose of their stock at bargain figures, yet upon being requested to furnish

your committee with an idea of the amount sufficient to purchase their plant, the lowest approximate estimate given was $4,000,000. The purchase of the Tonto Basin reservoir site and the construction of a dam would cost, approximately $2,500,000 more, making a total of $6,500,000. When we think that the people would be willing to vote even this immense sum upon a reasonable guarantee of ample supplies of water, yet it may be that it would be impossible to float bonds of that value upon our present assessed valuation of $10,000,000.

In this connection, and before proceeding further, your committee desires to state that the secretary of the Hudson Reservoir Co., and the local officers of the existing canal systems, have met us in apparent good faith; have been willing at all times to furnish us with data and information; claiming that they will never act the dog in the manger policy, but that they are now and will be ever ready to meet the people more than half way in any proposition looking to the welfare and prosperity of the Valley.

For purpose of argument let us assume that we create by our votes a bonded indebtedness of $6,500,000. These bonds, if they would sell at all, could be placed at 4½ per cent per annum, which would mean an annual indebtedness for interest of $292,500. Add to this an expense account of $100,000 (probably necessary for repairs and improvements, dredging, salaries and emergencies) and we have $392,500, which must be paid each year for water rents.

The men who cultivate the valley lands are today paying $1.25 per acre for just what water they can get.

When we buy water for 100 acres of land there is absolutely no assurance that we can get enough for ten acres. With water stored ready for use when needed, and in quantities required, we could well afford to, and would gladly pay $2 or $3 per acre. There are 300,000 acres now reclaimed under existing canals, and 200,000 acres more available. According to the figures of all engineers who have examined into the matter, the Tonto Basin reservoir has a capacity of 800,000 acre feet, which with what water we are now getting from the Verde and annual rains would be ample for 500,000 acres.

We have then this proposition:

500,000 acres at $1.25 per acre.	$625,000.00
Annual interest and expense account. . .	392,500.00
Balance to the Valley's credit at the end of each year.	232,500.00

This sum would create a sinking fund that would pay the bonds in about 25 years, and this without increasing the cost per acre for water, or the investment of a single dollar in cash.

These figures are based, of course, on the assumption that every acre of the 500,000 available pay its water rent. The fear that water would not be purchased for all the land could be dispelled by a clause requiring such purchase. This would do away with the holding of vast areas of land by non-residents for speculative purposes.

The proposition outlined above is in no sense visionary. The site for a large and ample reservoir is a fact. It is so located that by the expenditure of about $2,000,000

a lake of 800,000 acre feet of water can be impounded. The drainage area is so immense, and covers such a vast extent of territory within the heaviest precipitation belts, that, without taking into account the extraordinary floods, which cannot very well be measured, enough water is assured beyond the shadow of a doubt, for all the purposes of irrigation required in the cultivation of 500,000 acres, and the necessities of 1,000,000 people.

Bonds might be sold and work begun within a year by the exercise of a little energy and determination. It is customary, and oftentimes wise, to issue bonds for the purpose of building railroads, where private corporations are simply given the price of the bonds. The railroads do not guarantee reasonable freight or passenger rates; in fact they guarantee nothing. They create nothing. They are money makers pure and simple.

As the storing of surplus waters for times of need is the great object to be attained at this time, it might be well to consider nothing more now than the issuing of bonds for the purchase of the Hudson Reservoir and building of a suitable dam. This would require $2,000,000 or $3,000,000.

The existing canal companies would be willing to pay the $300,000 per year to the new organizations as to the old; or equitable arrangements could be made for the use of the existing canals.

The main object is to get adequate storage works and get them soon. The whole matter is left for consideration and action by the people.

It is wonderful the unanimity with which the people are getting together on this proposition. For once it seems that the residents of the Valley of all sections and interests can stand together on the basis of mutual interest and welfare.

Nearly all with whom your committee has talked have been emphatically in favor of pushing the bonding project. We have been met, however, by the following objections, viz:

1. The impossibility of raising the money on the bonds.

This objecti n we are, of course, unable to answer affirmatively or negatively. This we know, that the County has property assessed at $10,000,000, which is worth $50,000,000; that the construction of storage works necessarily increases the price of every acre of land available even though water rights have not been purchased, because of the fact that it is impossible to secure these. Upon the completion of such works there would arise an unearned increment in the value of all lands, for with the assurance of ample supplies of water to any portion of the county comes confidence and hope. This increment of value applies equally to all lands cultivated and uncultivated, and to all industries and interests in country and city, and is worth vastly more then the entire cost of the storage works.

This increment, with the increased population and values, together with the $6,500,000 borrowed funds, would be our assets.

2. Impracticability of impounding water by means of reservoirs on account of the rapid accumulation of silt.

The best answer to this objection is the fact that reservoirs are now in existence that have been in use for more than 100 years. There are reservoirs now in the British Indies, Africa, Egypt, Spain, France and Italy that have been in use for several generations. The conditions there are exactly similar to those here. What the people of the old countries can do, the energy, determination and will of young America may certainly accomplish.

It is true that silt will accumulate, but equally true that man's genius will by the usual methods of sluicing or hydraulicing, or by some other means, solve this problem.

If the storing of water were proposed for the first time there would be reason for long delay and much worry over this proposition, but this reservoir when completed will be but one of a great many thousand now in profitable operation. What has been done in India or Australia, certainly may be accomplished in the Salt River Valley.

3. That this committee is working in the interests of the canal companies.

This charge is met by the simple statement that to avoid any such suspicion your committee was selected. Not a member of this committee has any financial interest in any canal in the Valley. We are simply working faithfully and honestly to secure to the Valley the permanent prosperity and comfort that a bountiful water supply would inevitably

bring, and we expect to reap our reward in sharing these blessings.

The benefits accruing from the inauguration of the scheme as outlined are so obvious that it seems a waste of words to go into details. The moment the undertaking is assured the value of every acre of land in the Valley will be largely enhanced; all available land will be reclaimed; farmers will be able to produce six crops of grass when now they cannot raise three, and the fruit men will be assured of prolific measures. Phoenix will grow by leaps and bounds and her business will be immense. Cattlemen will have no difficulty in securing rich pasture; we can feed the sheep of the world; lumbermen will be kept sawing night and day, while tanneries and factories will spring up as by magic. Society will be as good here as anywhere on earth, our influence will be powerful, and statehood assured.

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CONCLUSION.

In conclusion your committee has the honor to suggest:

1. That it is desirable above all things to have an abundant and permanent water supply.

2. That the means for securing the desired end are at hand waiting only for intelligent action.

And we earnestly recommend:

1. That this community wait no longer in the hope of obtaining relief from private capital or Federal aid, but that an Act, entitled "An Act to provide for the organization

and government of irrigation sections, and to provide for the acquisition of water, the acquiring of reservoir sites and canals and other property, and for the distribution of water thereby for irrigation and other purposes," be prepared at once, and a united and persistent effort be made to secure its passage through the short session of the present Congress.

2. That active measures be taken to educate and enlighten the people on the importance, extent and designs of the irrigation movement by the distribution of literature, mass meetings, etc.

S.M. McCOWAN, Chairman
B. HEYMAN
J. ERNEST WALKER
VERNON L. CLARK
D.A. FOWLER"

The ceding of lands for that purpose would, if carried out be a long drawn out and tedious process; as to the third plan, that of private enterprise, much preliminary work had been done on several sites, but all had been abandoned except that in the Tonto Basin but there was at this time but little activity.

The fourth plan suggested was for Maricopa county to bond itself for sufficient funds to purchase and construct suitable reservoirs and the report considered this the most feasible plan.

The result of this report was that the then Board of Trade issued a call for a mass meeting of all persons interested in the subject of securing an added supply of water for irrigation to meet at the old Morris Opera House on Friday, August 31st, 1900.

Some time after the construction of the original Swilling ditch, it was extended and a branch was taken from it at a point about two miles below its divergence from the river, and constructed to the north and west, and became known as the Maricopa canal, serving in general land lying between it and the Salt River Valley canal, approximately 18,000 acres; the head of this canal in the river is the same as that of the Salt River Valley canal, and is known as the "Joint Head."

In 1878 construction was begun of the Grand canal, which had its head on the river at a point about three miles above the Joint Head, serving land lying between it and the Salt River Valley canal, approximately 17,000 acres. After the great flood of the year 1891, the head of the Grand canal was discontinued and the Grand canal thereafter received its water from the Arizona canal by means of a cross-cut therefrom.

In 1885 the construction of the Arizona canal was begun. The head of this canal was above that of all the other canals in the valley at a point some twenty-eight miles east of the City of Phoenix. The Arizona canal is the most northerly of all the canals and serves land lying between it and the Maricopa canal, and also some land on the north side of the river east of the Grand, Maricopa, and Salt River Valley canals, in all approximately 38,000 acres.

Water is also diverted from the river by means of the Arizona canal and conveyed through the cross-cut to the Maricopa

The local newspaper, in referring to this call, published an editorial entitled "HOW TO GET WATER" which is as follows:

"It will be known today whether the people of the Salt River Valley are sufficiently desirous of a permanent and sufficient water supply to bring their different plans for obtaining it together and constructing out of them a single plan upon which all can agree, even if they are not quite satisfied with it. If this common plan cannot be reached the matter may be considered to be indefinitely postponed. Promoters of the various projects have come very close together and there is reason to believe that it will not be difficult to bring them wholly together. The whole subject has been gone over so thoroughly on the streets, in private conversation and in the newspapers that it does seem that a wordy discussion is necessary today. If there ever was a subject demanding business-like treatment it is this one. There is no time to waste upon theories which have been exploded or upon others which remain to be proved. Every man knows that the valley needs more water and every man knows equally well that it cannot be obtained with the means at hand. It is equally well known that a storage of flood waters is a necessity. These things need not be discussed at all. The drouth of the present season has made them convincingly and disastrously plain. There is only one thing to be considered: How shall the money be secured for the building of a storage reservoir?

For that purpose the following call is published for the last time:

Believing there is urgent need of some action in regard to a better supply of irrigating water for the Salt River Valley, and having faith that much can be accomplished by concerted action of the citizens of Maricopa County, a meeting is hereby called by the residents of said county to be held at Morris Theatre at 10 o'clock A.M., Friday, August 31st, for the free and open discussion of ways and means for providing a better water supply, for irrigating in said county. Said meeting to be in the sole interest of the people. Everybody who has the best interests of Maricopa County at heart is earnestly requested to be present and express his views on the subject.

Goldman & Company, Walter Talbot, John Y.T. Smith, John T. Hughes, F.H. Parker, G.U. Collins, F.G. Fisher, D.L. Murray, F.L. Criswell, T.C. Norris, David Goldberg, Thomas Hayes, J.D. Monihan, Wolf Sachs, A.J. Peters, Albert Miller, J.F. Haigler, W.R. Lewis, J.S. Watrous, Thompson Walker, William Newell, L.D. Cook, E.C. Woodmansee, A.P. Shewman, T. Cronin, George C. Dorman, George W. Woy, F.C. Johnson, J.E. Drane, T.M. Gilbert, F.P. Drew, C.R. Hakes, O.S.Stapley, J.H. Roghers, H.W.Adams, Bartlett, Adams & Co., Mary W. Bartlett, B.A.Fowler, Henry Jennings, H.C. Mann - Woolsey, C.A. Barkley, M.B. Cole, S.S. Stout, James G. Hammels, V.E. Messenger, D.L. Sturges, E.E. Jack, C.D. Clark, S.E. Chapin, J.M. Grier, J.B. Hoover, R.C. Price, J.D. Crabb, C.N. Stewart, A.C. McQueen, S. Moote, W.A. McDonald, J.A.Stewart

H.B. Morris, Jr., W.J. LeBarron, E.W. Wilbur, S.L. McArthur, George A. McDonald, H. . Ware, John McBride, J. Miller, J.M. Pike, James Dalton, E. Kays, George H. Tweed and many others

The above call is cordially concurred in by the water storage committee of the Phoenix and Maricopa Board of Trade.

S.M. M'GOWAN, Chairman
B. HEYMAN
J. ERNEST WALKER
B.A. FOWLER
V.L. CLARKE

Arizona Republican, Aug.31,1900.

The next day the paper, in giving an account of the meeting, headed its account with a head line "A START AT LAST - THE FOUNDATION OF A STORAGE RESERVOIR LAID" which read as follows:

"The Agitation begun by the Republican Results in a movement in the certain direction of a permanent water supply.

The greatest congregation of farmers ever assembled in the Salt River Valley met at Morris Theatre yesterday morning. There were many others than farmers there, for the object of the meeting was equally attractive to townsmen. The further progress of the town as well as the country was at stake. Men had met to see if some plan could not be agreed upon by which an adequate and permanent water supply could be secure . The meeting was the direct result of an agitation of the subject begun by The Republican more than two months ago in the advocacy of a simple project for the construction of a storage reservoir. Discussion was invited and aroused, and other plans evolved. Men met on the street corner to

talk about it. The farmers by reason of lack of water this season had plenty of time for discussion and a strong incentive to engage in it. Out of it all grew this meeting which was fairly harmonious, and out of it has grown a beginning which may result in something.

The meeting was called to order by Walter Talbot, President of the Phoenix and Maricopa County Board of Trade. He said the meeting was held in the interest of no clique or corporation. It was desired that the freest expression should be allowed to every man interested, and all were interested; it was also desired that the street corner discussion which had been going on for years to no purpose might be crystallized into some tangible, reasonable and feasible plan.

Mr. S.A. Fowler of Glendale said that such a gathering of farmers so early as the middle of a forenoon indicated that a matter of great importance had been brought forward for consideration. The importance of a water supply, he said, could not be exaggerated. The subject had been presented to the community in a most painful and forcible manner. Mr. Fowler nominated Col. S.M. McCowan for chairman of the meeting. The motion was seconded by Sam F. Webb and adopted.

TIME TO QUIT TALKING.

On taking the chair, Mr. McCowan addressed the meeting at considerable length covering the whole field in a pleasing and forcible manner. When he came here ten years ago, Mr. McCowan said, he heard the subject of reservoir construction

talked about by certain men. The same men were now harping on the same old string while the storm waters were rushing to the sea, leaving the land dry and languishing. The people of the Valley had been crying to the waters, "Halt!", had cursed each other and the canal companies, and had engaged in profitless litigation. "If all the curses", said the speaker, "had been collected at the mouth of the Tonto Basin reservoir site and had been cemented by all the lies that had ever been told in the course of the discussion of the reservoir problem, a monument of infamy would be piled up to the skies, but not a drop of water would be saved by the construction."

It was the opinion of the speaker that more work and less talk was now needed. Chairman McCowan said that we could not have in this world precisely what we would like to have. Our lives are made up of compromises. In this matter of water saving, while the object aimed at was the same, there were widely varying methods under consideration. The theory of government aid might as well be dismissed. It might come some time, but too late to do the present residents of the Valley any good. What was to be done, he said, must be done quickly for the drouth of the last seaason had filled the land with heartsickness and discouragement. The pastor of a church in a rural community of the valley had already given letters to twenty parishioners who had been compelled to leave their homes and had no doubt gone forth to tell of the curse which rested upon the country.

SOME OF THE PLANS.

The speaker than presented a picture of the desolation. He spoke of the prior right man who had sought relief in the court to the sole benefit of his lawyer. The chairman was not in favor of the construction of a reservoir by private capital, and while the plans of Dave Goldberg and M.S. Messinger, published in the newspapers, resembling in some respects the Wright law of California, were attractive, they bore the stigma of failure. The Christy, Fowler, Redewill and Murphy plans were open to the objection that they put the burden upon the farmer, though he was not the sole beneficiary. The chairman said he had understood that the people of the Buckeye country were apathetic if not actually opposed to a plan of bonding the county. They were described as Lazaruses feeding on crumbs, parasites upon the valley, and vendors of second-hand goods. The water supply this year, however, was not as bountiful as it had been and perhaps next year they, too, would be clamoring for water.

John R. Norton of the Buckeye country subsequently corrected the chairman saying that the residents of Buckeye, favored any reasonable plan for securing a better water supply for the whole Valley. The chairman believed that the people should control the water supply and they could not control it without owning it. Hence, he favored construction by the county. The sentiment of the meeting was indicated by general applause.

THE BOARD OF DECISION.

George D. Christy was made secretary and H.M. Chapman of the Board of Trade sought to expedite matters by holding the speakers down to ten minutes. Mr. Ford opposed the suggestion on the ground that a man who had given the subject any thought could not have a free expression in ten minutes. A.C. McQueen moved the appointment of a committee of twenty-five, ten to be appointed by the chair and fifteen by the house, to receive all plans and report one of them at a subsequent meeting. Col. William Christy amended this motion by a provision that the membership of the committee be made up of two members, each from the north side canals, two each from the Tempe, Mesa, Utah and Consolidated canals, one each from the San Francisco, Highland and Buckeye canals, three from Phoenix, and one each from Tempe, Mesa and Glendale. The motion and the amendment were allowed to go over until the afternoon.

An address was delivered by Judge Kibbey in which he advocated the taxing of the products of the mines, amounting annually to $100,000,000., the proceeds to be applied in part to the development of irrigation enterprises.

B.A. Fowler said he had not been a resident of the Valley very long, but long enough to have been a sufferer. He arrived here a year and a half ago in time to reap the fruits of the drouth. He had no pet plan in mind, but was in favor of any which promised the attainment of the end aimed at, and when one had been once adopted it should never be abandoned.

Dave Goldberg, the originator of a plan which was given prominence in the Republican some weeks ago called upon and briefly described it to the meeting.

The following plan was then offered by Captain W.A. Hancock, the only one presented in detail:

CAPTAIN HANCOCK'S PLAN

Mr. Chairman and Gentlemen:

I am going to speak to you as an old resident of the territory, and as one of the oldest residents of the Valley.

The question that has brought us together here today is of vital importance to every resident of the Valley, man woman or child.

The question of how we can secure an ample supply of water for the irrigation of this valley has the primest oldest blessing upon it, the enrichment of us all and the consequent happiness of all of us - if riches can make us happy.

The question for us today is, whether out of the more or less conflicting plans or propositions that have been discussed in the local papers and among ourselves we can formulate a plan, some plan or proposition that can be carried through to a successful issue. We all know that the average annual flow of water from the vast water sheds or catchment basins of the Verde and Salt rivers, comprising about fifteen thousand square miles, would be ample for the irrigation of more than 275,000 acres now under cultivation in this Valley if it could be impounded and reserved for our use at such times as it is needed for the irrigation of the crops in this wonderful valley. I say wonderful because it is so in the fullest sense of the

term. It is wonderful on account of the soil and its adaptability to the production of the most profitable agricultural crops. It is wonderful because it is so perfectly adapted to irrigation. Many of you will remember that a few years ago the senate of the United States appointed a committee to examine and report upon the amount and condition of the arid lands in the United States, and the practicability of their reclamation. You will also remember that among that committee were some of the most eminent men of the country. That during their visit in this valley Senator Stewart of Nevada, in a speech on the city hall steps, said that he had seen and examined all the arid region of the United States and that no where in all his travels had he seen such a wonderful valley at this, our Valley of the Salt River.

Following Senator Stewart, Senator Reagan of Texas said: "I have visited and examined all the arid regions of the world, and no where on the face of the earth can there be found such another valley as this. So rich in natural resources and so perfectly adapted by nature for artificial irrigation."

There are three principal requisites for the success of any irrigation proposition. First, the water shed or catchment basin that will afford the water. Second, the dam site with the requisite storage basin above it, where the water can be impounded and retained until it is required for the irrigation of the crops. Third, the land ample in quantity and fertile in character for the production of crops sufficient to make it a paying proposition.

A fourth condition we may say is the necessity for

the amount of money required to construct the work. I undertake to say that we have the first three conditions.

We have a water shed of fifteen thousand square miles to catch the waters. We have the best reservoir sites on the face of the earth in which, with the properly constructed dams, we can store the waters, and we have three hundred and fifty thousand acres of the best land on the face of the earth where the climatic conditions for the production of profitable crops are the best on the earth.

Now to demonstrate the fact that we have a sufficient amount of water. Our water shed or catchment basin is twenty-seven times greater than the area of land we want to irrigate. This being the case, if the rain fall or percipitation by rain and snow averages fifteen inches per annum, and we get a runoff equal to one-fifth of the percipitation (which is a low estimate), we have an annual runoff of three inches per annum from the water shed. This multiplied by twenty-seven gives us eighty-one acre inches of water for our land. We can allow 50% of this for loss by seepage, evaporation and other sources, and we still have forty and one-half inches for our land. This is a good showing for us to make if we desire to present the matter to capitalists to secure the money for the construction of the dams that will enable us to accomplish these results.

If I had a right understanding of the objects of t is meeting today it is to discuss this proposition of water storage, and ascertain if it is possible for us to formulate some plan by which we can secure the capital to store this water which

and Salt River Valley canals, thus adding to the supply of the two latter canals over and above that taken from them from the river at the Joint Head.

On the south side of the river the first canal constructed was the Tempe irrigating canal, begun in the year 1870, its head being at a point on the south side of the river about nine miles above the Joint Head. This canal serves the land lying under it and its various branches, approximately 24,400 acres.

A small ditch called the Broadway was taken out about 1870, with its head originally about four miles west of the Joint Head. The head, however, was abandoned about twelve years ago, and since then the land for which the canal was originally built, approximately 450 acres, has been served partly by an extension of the original Broadway ditch, receiving a part of the water through the Tempe canal (which water for more than the year last past, however, has been carried by the San Francisco canal), and partly through the Marmonier or French ditch, which latter ditch has its head below the Joint Head.

About that time a canal known as the San Francisco canal was also constructed, with a head about a mile and one-half above the Joint Head, serving land under it similarly situated, approximately 4,000 acres. An independent head for this canal has long since been discontinued and it receives its water through the Tempe canal.

for so many years has been running down to the ocean unused. For the consideration of all who are interested I have some suggestions to offer.

Suppose we start out with the proposition to organize a company with a capital of five millions of dollars? This is none too large because before we get through with it we must have a reservoir on the Verde as well as one on the Salt River. This company must absorb the canals as well as the reservoir sites, and it must habe the whole valley or at least all of the owners of land under the old canals at its back if it would succeed.

The land under the present canals to which title has been obtained from the government amounts to approximately 275,000 acres. The people who own the lands are the ones to be primarily benefited by the construction of the reservoirs. All the inhabitants of the Valley, including the citizens of this city and the smaller towns of the Valley, will be benefited to a greater or less extent according to the extent of their business interests in the towns or cities.

This Company should be organized by the people of the valley and all should take an interest in it according to their several interests. In order that we may present the matter to the capitalist who has the money that we need and must have to enable us to go ahead with the plans for the storage of water, this company must have a contract with the people who own the land, drawn up in proper form and made binding with the present owners and their successors, to the effect that they or their

successors in interest will pay to the company ten dollars an acre for the land owned by each respectively, payable one dollar per acre per annum. That all owners of city or town lots in any city or town within the region to be irrigated, should agree to pay 5% of the value of their lots to be paid in ten annual installments. The first payment to be made in six months from the date of the organization of the company. No further payment to be made for three years or until the first reservoir is completed. This would give the company $275,000 from the land and possibly $100,000. more from city and town lots, $375,000. in all, within the first year. Every subscriber should have stock in the company to the extent of the money paid in by them. This would take, say $3,750,000. of the stock, and we have $1,250,000. to use in absorbing the canals and reservoir sites.

As a part of the contract between the land owners and the company it should be agreed on the part of the company that no water privileges or rights to the use of water from the canals or reservoirs should be sold or in any way granted to any person, to the detriment of the persons owning the 275,000 acres under the present canals.

The contract between the company and the landowners should also contain a condition of agreement that the landowner or his successor should pay to the company ten cents per acre inch for the water actually received and consumed by

them, to be paid at the end of each month.

With contracts of this character drawn up and signed between the company and the landowner and the first annual payment of $375,000. paid in, the company will be in condition to place its twenty year 5% bonds for $5,000,000. which will enable it to push the work of construction as rapidly as it can be done with due regard to economy and durability.

With the money provided for under this plan the work can be continued until we have reservoirs sufficient for the storage of the waters of the Verde River as well as the Salt River. I think it also appears that the company will be fully prepared to pay the interest and principal of the bonds at the end of twenty years.

In this proposition I have not made any distinction between lands under the oldest or the newest canals. Perhaps it would be equitable to make some distinction, but I am of the opinion that before next winter all will be ready to join in the execution of the contracts herein proposed if it will secure the reservoirs. I am not hide bound myself in this matter. I am in favor of any plan or proposition that will give us the reservoir whether by bonding the county or otherwise. Anything that the majority can agree upon will satisfy me if it is practicable and gives reasonable promise of success.

If a committee is appointed by this meeting to formulate some plan of action, I hope these suggestions of mine may be submitted to them for consideration.

THE COLORADO SCHEME.

Sam F. Webb raised a general objection to any reservoir project upon the theory that within the last two years there had not been enough water in the river to fill a reservoir. He introduced the project of tapping the Colorado. A gentleman, said he, had lived in the valley five years and each year had seen enough water run to waste in a day to irrigate the entire valley for a year.

The subject of silt was introduced and one man produced a thick layer, the accumulation of a single run. Chairman McCowan replied that silt was not an insuperable obstacle to the success of water storage. There were reservoirs in India which had been maintained for a generation. There was no record of a dam ever having been filled up to the point of uselessness.

On the opening of the afternoon session the manner of constituting the committee to which the plans were to be submitted was taken up. Professor A.J. McClatchie saw difficulties in Col. Christy's substitute. Mr. B.A. Fowler favored the appointment of a committee of ten to select the committee of twenty-five, and J.B. Hoover spoke for the caucus feature of the Christy substitute. All this, however, was permitted to go over for the time and Sam F. Webb reintroduced his project for turning the Colorado river into Maricopa County, calling it Salt River and creating another Grand canyon. This project was strongly supported by the Tempe contingent, who wanted all other plans held up until this one could be investigated. All the advocates of the

removal of the Colorado, though none of them had ever seen it, had heard civil engineers say that it might be done.

NOT IMPOSSIBLE, BUT - -

Chairman McCowan said that nothing was impossible, though some things were exceedingly difficult. The waters of the Colorado are but little above the elevation of the Salt River Valley. They flow in the bottom of a canyon only 7,000 feet deep. All that would have to be done would be to dig a ditch 7,000 feet deep and from 150 to 200 miles long. Then there would be plenty of water for the irrigation of every acre of ground in the valley. The water of the Colorado, Mr. McCowan said, was not only useful for irrigation, but was beside a great fertilizer.

Captain Hancock agreed that the project was utterly impracticable. There had never been an investigation of the feasibility of the project, but the government maps and data showed conclusively that the Colorado could not be diverted by the expenditure of any sum which it was possible to raise. Dr. Ford said that in order to do it the water would somehow have to be carried across the Little Colorado and Canyon Diablo. That was the end of the discussion of the Colorado scheme.

GOVERNOR MURPHY SPEAKS.

Governor Murphy was then called to the stage. He spoke briefly saying that he was not the advocate of any plan. All were agreed upon the necessity of obtaining a permanent

water supply and the only feasible plans involved the construction of a reservoir. Objections had been made to the control of the water supply by private capital, but in his opinion it would be harder to get private capital interested in the enterprise than to control it. All the plans so far suggested were very intricate and involved many details which would have to be worked out. The governor touched upon the subject of grazing upon the forest reserves and the effect of grazing upon the irrigated districts lying under the watershed occupied by the reserves. The Interior Department he said, was giving this subject full consideration and the final decision would be made in the interest of the irrigated districts.

Mr. J.J. Adams called upon Dr. Ford, who made a stirring speech. We had been accustomed, he said, to call this the "Sun-kissed Land" and the "Garden of Eden", but those days were over and unless something was done the valley would lapse into a Sahara. Two more such years and he believed property in this county would depreciate fifty per cent. Water storage was the only salvation. The condition of the valley was well known throughout the country. On his recent visit east he found it heralded by the Associated Press, and all the lying he could do did not successfully controvert or remove the evil impression. Dr. Ford then advocated the confiscation, by force if necessary, of the Tonto Basin dam site. In reply to this suggestion Captain Hancock said it could not be legally carried out.

MR. M'QUEEN'S PROPOSITION.

A.C. McQueen submitted a proposition. He said he had been engaged in trying to find artesian water and had reached a depth of 1,200 feet. He intended to go on to the 1,300 foot level. If the county would then take up the experiment and sink to a depth of 2,000 feet, he would bear the expense if water were discovered; if not, the public would have the satisfaction of knowing that there was no artesian water in this country and no more money need be fooled away in experiments. The proposition was received without discussion.

George R. Christy submitted a plan involving federal aid after a beginning on the part of the county. Judge Stilwell addressed the meeting at some length on the legal features of the various propositions. Mr. J.C. Adams suggested a plan including the seeding of the arid lands and contributions from property owners. There were other addresses upon the various projects, after which the discussion reverted to the constitution of the committee of twenty-five.

THE MEETING DIVIDED.

Mr. J.C. Adams moved to amend the Christy substitute by adding to the committee the members of the water storage committee of the board of trade. He pointed out the great work performed by the board and the part it had taken in the agitation which had resulted in this meeting. Col. McCord spoke against Mr. Adams' amendment saying that the meeting had been called in the interest of the farmers. He said that the discussion had practically been taken out of the hands

of the farmers, the class most interested and now it was proposed by Mr. Adams to load the committee up with townsmen. Mr. Adams replied in a spirited manner. He said he had lived in the valley five years and during that time had sought to remove the evil impression which Col. McCord was endeavoring to make upon the meeting; that there was no community of interest between the town and country. He contended that there could be no antagonism and particularly in this matter; what was for the best interest of the one was for the best interest of the other. The financial interest of the city was greater than that of any other district in any enterprise involving the expenditure of money, since the town paid forty per cent of the taxes of the county.

A vote was taken upon Mr. Adams' amendment and Col. McCord demanded a division. Seventy-five votes were counted for the amendment and five against it.

THE COMMITTEE.

The Christy substitute was then adopted without dissent and a motion having been passed authorizing the committee to be appointed to have control of the time and place of future meetings, an adjournment was taken.

The various districts met and selected their committeemen. The following list was reported to the meeting:

Salt River Canal - J.B. Hoover, F.H. Parker
Grand Canal - William Christy, Sam E. Webb
Maricopa Canal - L.H. Orme, C.H. Christy
Arizona Canal - W.A. Wilson, E.E. Jack

Tempe Canal - J.T. Priest, J.W. Woolf
Mesa Canal - A.C. McQueen, R.M. Wallace
Utah Canal - J. Johnson, J. Watrous
Consolidated Canal - A.J. Chandler, W.H. Code
San Francisco Canal - W.A. Hancock
Highland Canal - W.H. Wallace
Buckeye Canal -
Phoenix - J.M. Ford, Walter Talbot, Dave Goldberg
Tempe - E.A. Hough
Glendale - V.E. Messinger
Mesa - W.A. Kimball
Board of Trade water storage committee - S.M. McCowan, B. Heyman, J. Ernest Walker, Vernon L. Clark, B.A. Fickas.

The meeting then adjourned and the committee met for organization, J.T. Priese was elected temporary chairman and V.E. Messinger temporary secretary. B.A. Fowler of Glendale became permanent chairman, and F.M. Parker Secretary. The committee fixed its first meeting for 2 o'clock on Tuesday, September 4th, at the Board of Trade rooms. Persons are invited to leave written plans with the secretar of the Board of Trade and meet with the committee on Tuesday.

The attendance at the meeting is estimated at 600 and, it is said, was made up of the most representative body ever assembled in Phoenix."

The Arizona Republican, Sept. 1,1900.

The final determination of this committee was a bill drafted to ask congress to allow Maricopa County to bond itself for $2,000,000. with which to build a storage reservoir. Mr. B.A. Fowler was sent on to Washington with this bill to secure its introduction as Arizona was then a Territory and could not incur indebtedness beyond a certain limit without the consent of Congress, and this same limitation applied to the subdivisions.

Upon arrival in Washington Mr. Fowler found Mr. George H. Maxwell working in connection with Senator Newlands of Nevada upon a plan to have Congress authorize the construction of irrigation works out of the proceeds of the sale of public lands and thinking this a better scheme than ours he joined with Mr. Maxwell in securing what is now known as the Reclamation Act which became a law June 17th, 1902.

It was now up to the land owners of the Salt River Valley to avail themselves of the provisions of this Act and to that end a general meeting of the farmers was called to meet in the county court house on August 2nd, 1902, the newspaper account of which is as follows:

"WORK IS COMMENCED

Of Securing a Reservoir for the Valley.

Mass meeting yesterday appoints a Committee to prepare plan for submission to the Secretary of the Interior.

The district courtroom was more than comfortably filled yesterday afternoon by the water users of the valley and others interested in the matter of the water supply. The convention was called to order at 2:00 o'clock by J.W. Woolf of Tempe. D.J.M. Ford was made chairman and Carl Hayden of Tempe, Secretary. Chairman Ford made a brief statement of the object of the meeting and Mr. B.A. Fowler, the representative of the board of trade at Washington during the winter and spring, was asked to address the convention.

Mr. Fowler stated that he had been sent to Washington not exclusively in the interest of irrigation, but to do

In 1877 the Utah canal was constructed with a head about five miles above the head of the Tempe canal, and it, together with the extension thereof afterwards built, serves land under it, approximately 11,200 acres.

In 1878 the construction of the Mesa canal was begun, which had a head in the river about two and one-half miles above the head of the Utah canal, and it serves land under it, approximately 16,400 acres.

In 1888 the construction of the Highland canal was begun, with a head about three miles above the head of the Mesa canal, and it serves land lying under it similarly situated, approximately 425 acres.

In 1891 the construction of the Consolidated canal was begun, with a head about three miles above the head of the Utah. It serves land under it approximately 2,300 acres.

In the year 1874 C.T. Hayden, a shareholder in the Tempe Canal Company, erected a flour mill at Tempe on the banks of the Tempe canal, and by an arrangement with the other shareholders of the Tempe Canal Company, had supplied to him through that canal water sufficient to operate his mill, being a maximum amount of water equal to a flow of 1,100 miners' inches. Since that date this mill has been continuously so served.

In the year 1887 a suit was begun in this Court entitled M. Wormser and others against the Salt River Valley Canal Company and others. It was a suit instituted for the purpose of enjoining certain parties to it, owners of the

whatever he could for the good of the valley. The measure then uppermost in the minds of the people was the statehood bill. He described briefly the course that bill had taken and the present status of it. At the same time there was pending the national irrigation bill. That contained greater possibilities for the prosperity of this valley than even the statehood bill did. In the original form of the bill there was no provision for the application of benefits of national irrigation to lands under private ownership, but Mr. Fowler said that there were friends of the Salt River Valley on hand and they secured the clause in the bill under which the people of the valley are now trying to secure the government construction of a reservoir.

The address of Mr. Fowler was in the nature of a report of his efforts. Much of it has already been published in interviews with him since his return a week ago. He paid a tribute to George H. Maxwell for his work in behalf of the valley, and he dispelled a misunderstanding that Mr. Maxwell had opposed the bill. He said that there were some features of the original bill which Mr. Maxwell had attacked, and as a result of his attacks the President had called a conference of the friends of the bill and a modification of it resulted.

Mr. Fowler repeated his regret that there had been an understanding that he had returned from Washington armed with a proposition from the Department of the Interior to the people of the Salt River Valley. The Department had no proposition to submit. There was the law and there was nothing for the people of the valley to do but avail themselves of the

opportunity afforded them by the bill. There was a diversity of interests here which would have to be adjusted, for the government would not deal with the people individually but only as one harmonious whole. There would be no destruction of vested rights, but the people and the canal companies would have to agree upon their rights. Then an arrangement would have to be made by which the government would be reimbursed within ten years for the cost of the reservoir. Then when a site had been secured the water users of the valley would be prepared to go to the Department with an application for the benefits of the irrigation law. In angeneral way Mr. Fowler said that before the government would move in the matter the water would have to be made appurtenant to the land.

Mr. Fowler was followed by Mr. Heard who had been in Washington previous to and at the time of the passage of the bill as the representative of the water storage commission of the county, though he was there in the interest of the enabling act. He and Mr. Fowler agreed that that Act had been left in a very satisfactory condition for passage at the next session of Congress if its passage were needed. In any event the bill had already served a useful purpose. It had been a means of education and the discussions here over it had given the people of the valley a better understanding of the situation which would enable them the more easily to get together in a plan for securing government construction.

Both gentlemen believed that a government reservoir was within easy reach. Not only the people of this county were interested in the movement but friends of national

irrigation everywhere were interested because of the favorable conditions here for initiating the national irrigation plan. They believed that a reservoir here would be taken as a model for the work which the government would perform in all parts of the arid region.

At the conclusion of the address of Mr. Heard, F.H. Parker offered a resolution for the appointment of a committee representing all interests in the valley to begin the work of agreeing upon a plan for submission to the Interior Department. The committee is to consist of twenty-six members, one each representing the following canals; The Arizona, the Grand, the Maricopa, the Salt River, the Tempe, the Utah, the San Francisco, the Mesa, the Consolidated and the High land; two members representing each the water users under the following canals: The Arizona, the Maricopa, the Grand, the Salt River, the Tempe, the Utah and the Mesa; two representatives of the City of Phoenix. There was the inevitable discussion of the plan for the appointment of the committee, but it was agreed that the members should be chosen within the next five days and that it should come together next Saturday, organize, begin work and keep at it until a plan for submission to the Secretary of the Interior should be completed.

A committee of three was also ordered to work in conjunction with the water storage commission in the work of securing a reservoir site.

A great deal of useless and time-consuming discussion was headed off by Chairman Ford, and the impression seemed to be conveyed that after some years of talk which had resulted in nothing there would now be a period of work.

Mr. Fowler left last night for Los Angeles, where he will meet F. H. Newell of the Interior Department, and they will go together to San Francisco, where they will meet Mr. Maxwell".

The Arizona Republican, Aug. 3,1902.

At this meeting a committee of twenty-five was appointed to be known as the "Water Storage Conference Committee". This committee was organized one week later and invited George H. Maxwell to assist in forming a plan in accord with the national reclamation act. Mr. Maxwell responded and on August 9th, 1902, he addressed a large meeting of the farmers and land owners and outlined a plan of action which met with general approval.

The Arizona Republican account of same on August 8th, 1902 was as follows:

"GOING TOWARD THE DAM.

Mass Meeting tomorrow to hear Honorable George H. Maxwell.

Another move has been made in the direction of securing water storage. A mass meeting of which notice is given in another column, of the Republican, will be held at the Court House at 2:00 o'clock on Saturday and which will be addressed by the Honorable George H. Maxwell, who will point out to the people of the valley the steps to be taken in order to obtain a reservoir to be built by the government. The calling of the meeting was consequent upon the receipt by Colonel William Christy yesterday of the following telegram

from B.A. FOWLER:

"Los Angeles, Cal., Aug. 7,1902.
With Maxwell reach Phoenix tomorrow. He must leave Saturday night. Would suggest he meet committee Saturday morning and public meeting Saturday afternoon. Advertise it far and wide.
B.A. FOWLER."

Colonel Christy also received a letter from Professor Newell of the United States Geological Survey, as follows:

"Los Angeles, Cal., Aug. 4, 1902.
Colonel William Christy, president Valley Bank,
Phoenix, Arizona.

Dear Sir:

Replying to your inquiry I desire to state that I have been instructed to submit to the director of the geological surve , and through him to the Secretary of the Interior, a full statement of all facts pertaining to various reclamation projects under examination. This report will be made with special reference to the feasibility and cost, and also as to the possibility of the cost being refunded, as required by law. In advance of the completion of this report, any expression of opinion is impossible.

On the other hand, I appreciate the importance to you of knowing the best course to pursue, under the existing circumstances, and although neither I nor my assistants can properly advise you, yet it may be allowable to call attention to the fact that the interpretation of the reclamation law, and its application to particular circumstances, may properly be entrusted to its principal advocate and exponent, Mr. George H. Maxwell. Further than this, my acquaintance with Mr. B.A. Fowler of your valley, and the

and the favorable impression he had made through his efficient yet conservative action, leads me to the belief that whatever he may recommend to you will be based upon a complete knowledge of proper methods and feasible ends.

Very truly yours,

F.H. NEWELL."

Speaking of these communications yesterday, Colonel Christy said: "All this plainly indicates to us that Mr. Maxwell is the man we must depend upon for guidance to enable us to secure the construction of the Tonto basin reservoir dam by the United States."

The report of the Arizona Republican of August 8th, 1902, was as follows:

"MR. MAXWELL ON PEOPLE'S PROBLEM.

He will address Salt River Valley Water Users today. Mr. Maxwell says that the way for Government operation may be prepared without difficulty or the sacrifice of any right.

Mr. Maxwell, whose coming was announced by the Republican arrived in the city yesterday morning, accompanied by Mr. B.A. Fowler. He will address the people of the valley this afternoon at the court house at 2:00 o'clock on the subject of government construction of a storage reservoir. His coming has been awaited with great interest for he has given the subject of government aid more attention than any other man, and he is largely responsible for the feature of the government irrigation bill which permits its application for the benefit of lands in private ownership. It is expected that Mr. Maxwell will explain this afternoon how this valley

may best avail itself of the provisions of the bill.

Mr. Maxwell was asked yesterday by a reporter for the Republican for an outline of his plan. He said that, generally, it was very simple. It was required only that the people should unite in asking the government to build the reservoir. The act of uniting, though, Mr. Maxwell said, must be admitted to involve many intricacies, but that they were by no means insoluble. The government would require a clear field of operations, but would do nothing to clear it itself. It could take no part in the adjustment of any differences which exist here now, and could not become involved in disputes that might arise by reason of the failure of the people to agree among themselves.

In this day of great industrial organization, Mr. Maxwell said he had no doubt that the people of the valley had sufficient business capacity to merge their interests so that they would be prepared to deal as a whole with the government. He believed that they not only had the ability to organize, but that they would do it and that they would secure the government construction of a reservoir at the Tonto basin site. Great as the differences might appear, Mr. Maxwell said that, after all, their settlement would be comparatively simple. The construction of the reservoir would furnish enough water for all, so that none would suffer by the terms of any agreement that might be arrived at. It was not, he said, as if the people were to attempt an adjustment of their differences with an insufficient water supply as at present. He could not believe that the property owners of this valley would allow the opportunity now before them to

pass by.

The rights of the water users of the valley were not widely divergent, and an arrangement could be easily entered upon by which none of them should suffer. No man would be deprived of any right or privilege he now enjoys, and all would be made gainers by the adjustment.

The government, Mr. Maxwell said, would be naturally favorably disposed toward an irrigation project in this valley. The site was the best known and the investigation of it had been carried further than upon any other.

All this will be explained by Mr. Maxwell in detail at the meeting this afternoon. The only thing the promoters of the meeting fear is that the court house will be insufficient to accomodate the crowd which will be there. Though the coming of Mr. Maxwell could not be advertised long in advance, there has been time to reach the farthest part of the county. His reputation as a worker for irrigation will be the attractive power.

This morning at 9:30 he will meet at the board of trade the conference committee of twenty-six authorized by the mass meeting of last Saturday. It is expected that the committee will work on such a plan as Mr. Maxwell may suggest today.

He will leave tonight for San Francisco."

Arizona Republican, August 9, 1902.

THE KIBBEY PLAN GIVEN IN DETAIL.

Necessary steps preliminary to water storage. Full text of Judge Kibbey's report to the water storage conference on Thursday.

The Republican herewith presents in full the plan

outlined by Judge J.H. Kibbey on Thursday in his report to the water storage conference committee for the accomplishment of work necessary to be done prelimiary to the construction of a government storage reservoir at the Tonto basin site.

In an attempt to devise a plan whereby the people of this valley may have the benefit of the purpose of the national government to construct, or to aid in the construction of reservoirs and other works for the storage and development of water for irrigation, we must properly interpret the laws affecting the subject, the most recent/being that known as the Newlands-Hansbrough Act.

The great object that this government has always had in view is the encouragement of settlers to go upon its public lands and there build and maintain homes for the support and the improvement of the material welfare of themselves and their families.

The object has not been, and is not now, merely to get rid of the lands. It is to induce people to go upon these lands and by offering them the lands and the water and the right to make those lands the most profitable that individual industry can make them, and thereby make them desirable and within the reach of its citizens, that the government has adopted its policy concerning the disposal of its public lands.

A nation of owners of homes has been the aim of every stateman who has given expression on the subject of the disposition of our lands. Such a nation is made up of conservatives, orderly, conscientious, industrious and peaceful people-people alert to the proper and honest management of

affairs, and patriotic--of all of which, prosperous and happy homes are the best possible pledge.

It is interesting to note that in every presidential message on the subject this idea is predominate, and that it has impressed its spirit on every law enacted by congress. In this spirit congress has always jealously attempted to guard the public domain against the encroachment of monopolists, speculators and absentee landlordism, and with like purpose in view has demanded of its beneficiaries some degree at least of personal industry to be expended upon the lands as a prime requirement in the acquisition of them.

Keeping this central idea and purpose, then, constantly in view, we can proceed to the interpretation of the will of congress as it is expressed, or necessarily implied in its legislation.

Originally, it must be conceeded, the national government owned as a proprietor, all the lands, and consequently all the waters within our territorial limits. (Certain possible exceptions relative to Spanish and Mexican grants do not affect the question).

No individual could acquire any right whatever, even that of simple occupation, to enter these lands or take the waters, without the consent of the proprietor (the government). Congress is the only agency of the proprietor to authorize the disposition of either the land or the water. Until 1866 congress had not expressed itself on the subject of the appropriation of water, and then it only merely recognized what had before only been tolerated--the acquisition of such rights by custom. But these customs do not concern us, and need no further notice,

canal systems, from the diversion of the water from the Salt river in derogation of the rights of the plaintiffs. The purpose of such suit and the reasons for it, historically applicable to this present suit, are set forth in the following extract from the opinion of Judge Kibbey rendered therein in the year 1892:

"The earlier efforts of the settlers under these older ditches toward cultivation was confined to the production of hay and grain, and a few garden vegetables, the cultivation of which was confined to that period of the year when water in the river was very abundant. As the settlement became older and its population increased, a more extended cultivation began to be undertaken. Instead of confining themselves to hay and grain, as above mentioned, the ranchers gradually began the planting and cultivation of alfalfa, fruits and vines, which required water during the entire year. Under the conditions as they originally existed, and as is usual in such cases, there were many usurpations and concessions of rights to the diversion of water, unnoticed at the time, or, if noticed, tacitly and without objection acquiesced in because of the then abundance of water. As the population increased and with it the more extended form of cultivation, a deficiency in water began to be noticed. While the river during the months in which hay and grain and the ordinary agricultural crops are being grown had in it a cast volume of water, this volume diminished with the advance of the season, from thousands of

for they never prevailed in this valley as a rule of property, no matter what the practice may have been, because before 1866 and before the earliest settlement of the valley, and before the establishment of Arizona as a territory, we had express local legislation on the subject. Custom cannot prevail against the unquestioned policy of the government, nor can it prevail against expressed legislation, even though the power of legislation were merely a delegated one, if the delegated power was exercised within the terms of its grant, expressed or implied.

The earliest legislation in this territory recognized the right of appropriation of water from the streams, lakes, etc, for among other things, the cultivation of its soil, and recognized that appropriators were entitled to priority of use of the water appropriated, in the order of the times of their appropriation, and, I think, by necessary inference, the fact of the right being appurtenant to the land, for which it was appropriated, as the right was limited expressly to the owners or occupants of the lands.

In 1877 Congress recognizing the arid conditions in a number of states and territories and wishing to promote the settlement of those states and territories, offered additional inducements to settlers by the enactment of what was commonly known as the "desert land law." Pursuing the long settled policy of having actual tillers of the soil as the owners of its domain congress provided by that law that the entryman could acquire title by paying a nominal sum per acre and for the reclamation and cultivation of the naturally desert land, authorized him to appropriate water from the public sources of supply and gave priority of right to such appropriators, in the order of the times of the appropriation, and upon proof of such reclamation and the permanent right to the

to the use of water the government transmitted its title by the same deed of both land and water to the entryman.

The judicial expression in this territory has never been otherwise than that rights to the use of water are prior as the appropriations were made in point of time, and that they are appurtenant to the land for which the appropriations were made. This is a fair interpretation of the legislation and is the only one consistent with the policy of the government.

The latest act of congress, the Newlands act, contemplates, and we are governed by it, that stored or other water impounded or developed under its provisions, shall be used only by those acquiring the right to do so under the act, and the right shall be inseparable from the land. Thus we have defined the status of the land owner, who has a right to the use of water.

What acts constitute an appropriation of water are held to be:

1st. The diversion of the water from the source of Supply

2d. The conveyance of the water to the place of use, and

3d. The actual use.

These different acts may be, and in practice in this valley are most frequently, performed by two different persons, that is, the diversion and carrying or conveyance is by one (an association or a corporation usually), and the actual use by another (the land owner or occupant). The land owner or occupant is the appropriator, for by the law, he is the only one who can appropriate water, and the carrier is merely an agency adopted by the appropriat to effect the appropriation. And thus we define the status of the carrier of the water.

The relation of the one, the appropriator, to the other, the carrier, must arise by contract, express or implied. Or if the

term may be used to promote brevity of expression--by estoppel.

Now it is probable that of these propositions none will remain undisputed by some or others of those whose interests are, or seem to be, variant. One of the first, and in any event, the most essential thing to be done, is the settlement of these disputed questions and if success is to be attained it is submitted they must be settled to be as they are here stated.

To settle them by simple agreement is impracticable. That involves unamity of all the disputants, which is hopeless; and it seems that it would be difficult to frame an agreement to be so definitive of the rights of all the parties as to be satisfactory to either the government or to the parties themselves. Nothing short of a decree of a court of competent jurisdiction will suffice, for that alone can be either definitive or final.

A very casual consideration of the Hansbrough-Newlands act will make apparent the absolute necessity for this settlement. It is sine qua non. It may be assumed that, from motives of self-interest--which in any case are always the safest to which to appeal--if from no others, the appropriators and the carriers of water in this valley are urgent for a prompt, definite and final adjustment of these questions. It ought not to be assumed that the settlement should be unfair, or disturb vested rights, nor should such an attempt be considered, for that would defeat rather than promote the object in view.

The variant interests may, at large, be divided into two classes; that is, the water users and the carriers, where the user is not also the carrier. There will have to be settled among the one class, the users, the question of time and extent of appropriation of water, and as to them, the fact that the right to use water is appurtenant to the land for which it was

appropriated. Amongst those of the other class, the carriers, assuming that they may preserve their autonomy, which they may do, there will arise questions of their relative rights to divert and carry water. All these questions are preliminary to and are independent of any consideration of the administration of stored water, and are questions in the determination of which the government probably cannot, and certainly will not, engage. They must be settled before we can go to the government at all. It may be taken for granted that the Hansbrough-Newlands act will be construed to authorize the construction of reservoirs for the storage of water for the irrigation of lands now in private ownership, for which there is only a partial and hence an inadequate supply, as are most of those to be benefited by the proposed Tonto reservoir. This construction seems easily warranted, and is in entire consonance with the purposes of the Act.

The act also contemplates the organization of the owners of the lands irrigated by the reservoir or other works into an association for the management and operation of the works. It is true that this management and operation will not, under the terms of the act, vest in such association until the major part of the cost of the works shall have been repaid to the government.

The cost of the reservoir at Tonto (or practically all of it) will have to be assessed against those who are now the owners of land that is now in private ownership, at a rate fixed by the government, per acre. This assessment will be divided into annual payments extending over a period of not more than ten years, and beginning at a time to be fixed by the Secretary of the Interior, probably beginning when the reservoir is ready for service.

The act suggests that the government will provide its own means for enforcing the payments of these assessments, except

possibly, and perhaps preferably, if the plan hereafter proposed shall be approved by the Secretary of the Interior, and the association selected as the medium of the collection of these payments to the government.

Now, if a plan can be devised whereby: First, all disputes among the variant interests beneficially concerned in the storage proposition so finally and definitely settled that the government has no concern in that respect, and Second, That enough of the owners in number and extent of land now in private ownership (and homesteaders under the act) shall initiate rights to the use of the stored water in the manner outlined in the act to warrant the government in the belief that sufficient money will by that means ultimately be repaid to reimburse it for its expenditure in the construction of the reservoir; then we have brought ourselves within the purpose, reason and object of the act and subjected ourselves to its conditions and have reason to believe that our application will be favorably entertained by the Secretary of the Interior.

Now, to accomplish these things it is proposed: First, To at once organize the association of water users contemplated by the act itself.

They should incorporate under the laws of the Territory of Arizona. Those, and those only, who have initiated rights, or may initiate rights to the use of water from the reservoir, should become constituent members. The act defines those to be homesteaders, or owners of lands now in private ownership, who initiate rights to stored water, under the provisions of that act.

The capital stock should be a sum equal to the estimated cost of the reservoir and other works undertaken by the government and divided into a number of shares equal, at a conservative estimate, to the number of acres that may be so supplied with

stored or other water. The division of the entire fixed capital by the number of shares, so ascertained, will of course fix the par value per share of the stock. As the proposed stockholders cannot now initiate their water rights under the reservoir, and cannot do so until the government should offer them for acquisition, the subscription for the stock should be for a cash payment for it at par, with a provision in the articles of incorporation, made irrevocable except upon proper consent of say, three-fourths of the stockholders (in value), that the stock of any subscriber shall be deemed fully paid up, upon the production by him of proper evidence, that he has initiated a right under the reservoir, conditioned for forfeiture, for his failure to comply with his engagement with the government, or with the association as the agent of the government for that purpose, in like manner and under the same circumstances as imposed by the government, and that until that time the subscribers of the capital subscribed for shall not be subject to be called upon for payment of their subscriptions.

In no event does the proposed corporation deal with the government in its corporate capacity, in initiating or perfecting any individual right; all those negotiations are by the individual with the Secretary of the Interior, precisely as though there were no such corporation, or if there were one, he was not a member of it. (Since writing this, Judge Maxwell, in his address to the people here, on the 9th of August, suggested that the government would probably prefer to deal with the association rather than with individuals who seek to acquire rights under the reservoir. If so, that would simplify matters and the association could become practically the agency of the government in that respect.)

The initiation of the acquisition of the right and its final perfection are mere qualifications to membership of the proposed corporation, and it is the principal qualification required by Section 6

of the Hansbrough-Newlands act for membership in such an organization.

In making estimates the most conservative care should be taken. If error is made in fixing the estimate of cost too high, and extent of acreage of land too low, they can be corrected to meet the event with advantage to all; while if the estimate of cost is made too low, and estimate of irrigable acreage too high, the mistake cannot be remedied. To exceed the limits ultimately and irrevocably fixed by conditions in the estimate of lands capable of irrigation by the reservoir is disastrous. We can expand to meet conditions, contraction is impracticable, if not impossible.

Until the management and operation of the works shall be turned over to the associated land owners having rights under the reservoir the government will of course have the administration of the stored water; and that it may be assumed will be in accordance with expressed wishes of the right owners whether expressed by them jointly through their association or by them individually.

In practice the government would not only prefer, but it seems would have to have the joint expression of the right owners as to the distribution of the stored water. Of course always within the rules and regulations creating and defining those rights. Neither the association, nor could the individuals composing it, prescribe rules and regulations inconsistent with those prescribed by the act, or by the Secretary of the Interior by virtue of the act. The rules of the association, then relative to the administration being necessarily identical with those adopted by the government, the purpose of the organization is to that extent accomplished, even though management and operation of the reservoir and other works for its accomplishment are temporarily with the government.

There is neither proposed a partnership of government and association, nor can there be interference by the association, either with the purpose of the government or its methods for its accomplishment. Both are independent, seeking to accomplish a common purpose, with the association always subordinate to the government, until by lapse of time and happening of events, the management and operation of the works by the terms of the law, vests in the association.

Now it may happen that some may subscribe to these articles of incorporation who may never qualify by becoming the initiators of rights under the reservoir, either because they do not apply to become so or because there may not be enough rights to be had. To meet this condition, a provision should be made that a reasonable time shall be limited after which applications can be made for such rights, within which application shall be made therefor, failing which the subscribers shall become disqualified, shall be released from his cash subscription, and lose his rights as a stockholder.

Incident to the power to manage and operate the work constructed by the government as provided in Section 6 of the act, are naturally the power to acquire the means of distribution of the water stored and developed, as waterways, pipe lines, flumes, gates, dams, etc., and to acquire or use agencies for that purpose, and to manage and control any of these, according to the rules prescribed by the government as to the stored water, pending the vesting of that management and operation in the association, and independent of that, but of course never inconsistently, the distribution of other than stored water, as long and in so far as a distinction can be and is desired to be preserved between stored water, and that normally flowing in the rivers. Those

powers should be carefully defined and stated in the articles of incorporation and yet made comprehensive enough to meet any conditions existent or that can be anticipated.

There are now waterways and other means of distribution in the valley more or less adapted to the needs of distribution of stored as well as other other water. Provision should be made for the use of these means, or such of them as may be expedient, as is well, if after careful consideration it be deemed best, the acquisition of new and other means. It seems almost too flat a truism to say that the government will not undertake to store water, if there are no means provided for its distribution to the users--and those means must be adapted to that purpose. It is true that the act may be construed to authorize the Secretary of the Interior to construct or otherwise acquire means of distribution of the stored water, but it seems unreasonable to expect it, under the conditions prevalent in this valley.

As the means for the distribution of stored water is so necessary an adjunct to the storage works, the government will naturally and logically require that the means of distribution shall be coextensive with the storage works themselves--shall be entirely adequate to the service and subject irrevocably to all the rules making of practical use, to accomplish the purpose of the construction of the storage works, the water so stored.

The owners of the present canals have certain rights, property rights, that cannot be divested without their consent or by the exercise of its power of eminent domain.

It is extremely desirable that the means of distribution of all water, stored and other, shall be under the immediate and

and exclusive management and control of the water users. Several plans suggest themselves for the accomplishment of this desideratum.

If the canal companies, the owners of most of the canals, should preserve their autonomy and the ultimate title to their property then a perpetual contract could be entered into between them individually with the association of water users, whereby:

First. The property is perpetually leased to the association for an agreed reserved rental payable annually or otherwise, with a right to the association to purchase, or

Second. Whereby the canal company shall undertake to carry and distribute stored and other water to its customers at a reasonable cost to be agreed upon between the company and its customers subject, however, to the rules of the government as prescribed by the association for the distribution of both stored and other water, not inconsistent with those prescribed by the government, with an agreement to sell to the association.

Either of these plans are short of the desideratum, and involve many practical difficulties. Still they are practical. Each of the above propositions, it will be noted, reserve to the association the privilege of purchase. Many contingencies too numerous to mention here, but necessary to be considered, are to be met, as expiration of corporate franchises, existing contracts, mortgates, etc.; difficulties not insuperable, but tedious and complex in the working out. They exist and have to be met.

A more desirable plant is the purchase outright by the association of such of the canals, etc., as may be found necessary or desirable for the purposes of the association.

of cubic feet per second to about, at a minimum of, three hundred cubic feet per second, and as both the increase of population and the different products to which the land was cultivated increased, the demand for water in the summer months, when the supply is the least, aggravated by an unnecessary and very considerable waste of water, exceeded the supply. This deficiency of supply made at once the question of priority of right to appropriate water, important, and that question is the subject matter of this suit."

The canals which followed were as follows:

Tempe.	1870
San Francisco.	1871
Utah.	1877
Grand.	1878
Mesa	1879
Arizona.	1883
Arizona Cross Cut.	1889
Highland.	1888
Consolidated	1892
Appropriators.	1904
South.	1908
New Cross Cut.	1912
Western.	1912
Highline	1912

All of these earlier canals had temporary rock and brush dams for heads into the river until the Arizona built a wooden dam near the present location of the Granite Reef Dam.

There was always more or less talk about the storage of water and one private company filed on the dam site at the junction of the Salt River and Tonto Creek which is now the location of the Roosevelt Dam. This was the Hudson Company who afterwards sold their holdings to the Government.

A rather anomalous situation would arise between the proposed association and the canal companies when we come to consider them as possible purchaser and seller, the one from and to the other. There would be but one possible purchaser and that purchaser would be anxious to buy, and there would be but one seller and he would be anxious to sell; it would seem that they should easily agree upon terms.

The maximum value of the property to be sold is simply the amount of money necessary to construct a new system of canals, etc., adequate to the carriage and distribution of both stored and other water.

In the event of new construction the old canals would be valueless, for there would then be no purchaser and the relation suggested above as anomalous would be changed. If this plan of purchase were adopted it would have to be after it was found desirable to do so after negotiations have progressed so far as to determine the price and the terms of its payment. The price should be satisfactory and the terms of payment adjusted so as to be conveniently met by the purchaser. In this plan, as in the others suggested, there will be difficulty in adjusting the rights of lienors and others who will have to be dealt with before final consummation. The rights of water right owners offer no obstacle, for if the association is formed as suggested, and a purchase of any or all of the canals are effected by it, the water right owner's right is replaced by a better one in the association, and merged in it, as will be hereafter explained.

Another, and the simplest plan, is the acquisition of the canals by the exercise of the power of eminent domain, by condemnation proceedings. This plan may be adopted to acquire the title to one or more of the canals, or of all of them seriatum, as the association may elect, the procedure being entirely adequate to those ends. This

plan eliminates in a great measure a consideration of the right of lienors, etc., as they are transferred to the fund created by the payment of the assessed damages.

Finally, the association may construct its own system of canals and other distributive works.

I have at hand no data from which to make an estimate of the cost of the execution of any of these plans, but whatever that cost may be it will have to be paid. The cost might and should have considerable influence in the determination of the selection of a plan.

Now, as the raising of funds for meeting the cost under any plan: The articles of incorporation should provide that all the ordinary expenses of maintenance and operation should be annually or at other stated intervals be estimated by the directors and assessed pro rata by the number of acres, against the stockholders. That when an extraordinary expenditure is contemplated, as for the purchase, construction or other method of acquisition of a canal or other works, exceeding in cost, say $5,000, the board of directors shall formulate the same into a proposition to be submitted to the stockholders. The proposition should contain a statement of the purpose of the contemplated expenditure and the estimated amount of it fully enough to acquaint the stockholders in a general way of the purpose of the expenditure. Upon a resolution of two-thirds of the directors a special election by the stockholders shall be called to consider the proposition submitted, and if two-thirds of the stockholders shall vote in favor of the proposition the directors shall proceed to carry on the work proposed, and shall assess the estimated cost thereof against the stockholders, as hereinafter proposed.

For the purpose of these extraordinary expenses the country embraced in the lands under cultivation by stockholders of the association should be divided into districts, These districts should be made severally to consist as nearly as it is practicable to do so of lands immediately supplied by the canal system; as, tentavielyk those lands under the Salt River Valley canal should constitute one district, those under the Maricopa another, those under the Utah another, and so on. Then when it is proposed by the association to expend money for an extraordinary purpose, as for the acquisition of a canal by purchase, condemnation or construction, the cost should be assessed against the stockholders of the district particularly benefited, and amongst those in that district as they are individually benefited.

It should be provided that if in particular cases it should seem inequitable to assess the whole cost against a particular district, then the council should have power to direct what portion should be so assessed, and what portion should be borne by the association at large.

If the proposed expenditure is not required to be all made in one year the assessments may be made payable in annual or other periodical installments, adjusted so as to meet the expenditure as they may be required. The manner of enforcing the payments of such assessments is explained in another place.

The articles should provide that the shares of stockholders should be complete evidence of the right of the holder to the use of the water for the irrigation of designated land at the rate of one acre for each share of stock, subject to the rules and regulations prescribed by the association therefor. That the ownership of stock

shall be evidenced by a certificate thereof, duly attested by the proper officers of the association, wherein the lands to which the water right is appurtenant shall be described with certainty sufficient to identify them. That the stock shall be transferable on the books of the association, but as appurtenant to the lands described in the certificate, and the same shall be deemed to pass, whether expressly conveyed or transferred by any conveyance of the land, or pro tonto any part of it to the successor in title, whether such transmission of title is by grant or by operation of law. It should be further provided that any stockholder by the act of subscription shall pledge the land an a purtenances for which water rights are acquired and evidenced by such certificate of stock for the prompt payment of all assessments made in the manner prescribed by the articles, and that the lien for the payment thereof may be enforced by a sale of the land or so much thereof as may be necessary to discharge the same from time to time, and as often as such assessments are in default. Such sale to be by the treasuror of the association, upon due notice, and at a place designated, with a reasonable time of redemption reserved. The particular provisions concerning the enforcement of the collections of the assessments should be very definitely stated.

The creation of this lien will probably require the assent of the wife, where the land is community property, but this presents no great difficulty. It must be remembered that the whole matter, whatever plan be adopted, will particularly, at first, involve long and tedious labor. But there is no evading it and it ceases to be formidable when it is considered that the work is much of the same character, and no more difficult, than the assessment of county taxes, and can be done much cheaper and much better.

Each stockholder of at least one share should be allowed one vote at all corporate elections, and only one, whatever the number of shares he or she may own, and his or her qualifications as an elector shall be determined by reference to the association's books as they appear, say twenty days before an election. In no event shall voting be permitted by proxy, but must be done at the designated polling place or places, by the stockholder in person.

Regular elections should be provided for, to be held annually for the election of directors, and upon other matters properly referable to the stockholders. These regular elections should be held in the spring, so as to be free from the influences of and the confusion incident to county and territorial elections. Specific rules governing elections should be provided, as for polling places, election boards, voting, canvass of votes and returns, etc. Provision should be made also for the calling and holding of special elections. There should be provided a council, in whom shall be lodged the general legislative powers of the corporation, as to making, modification or repealing of by-laws, for the government of the members and the directors. The council should consist, tentatively, of say forty members, who shall be stockholders, one-half elected every year, and holding two years. This council should meet in regular session at designated times and places, and specially when called by the directors, or by a designated number of the stockholders. To this council should be left the general matters of the by-laws, the fixing of salaries and compensation of officers, etc. They should serve without compensation and be governed in the transaction of their business by rules usually governing legislative bodies.

The immediate management of the affairs of the association should be vested in a board, of say nine directors, and in such officers as the articles of the association or the council may prescribe. The board should hold regularly designated meetings and special ones in a manner to be prescribed by the by-laws. The directors should be allowed a proper compensation, to be fixed by the council. There should be a president, with the usual executive powers of that office, who should also be the presiding officer of the council. There should also be a secretary and treasurer exercising respectively the usual functions pertaining to those offices, who should be required to execute a proper bond in amount and with sureties prescribed by the council. Any proposition emanating with the directors, involving an expenditure of more than $10,000, shall be first approved by the council before being submitted to the stockholders. Council may prescribe penalties for the infraction of by-laws and provide that those imposed, if not otherwise discharged, shall be added to the assessments against defaulting stockholders and collected as assessments are.

Now, as to the settlement of the rights of water users, as they now are, and which the act expressly provides shall not, and which could not, be disturbed or divested.

A discussion of the matter here seems unnecessary. That there is a priority of right to use water must be conceded. The priority of appropriation is the fundamental rule of all property; the first right to it was its appropriation, and every right is inevitably traceable to it. As with any other species of property so it is with the property in the right to use water. If there is enough for all to take indefinitely, and as he wants it, the exercise of the right conflicts with that of no other, and priority be-

comes a distinction of no practical importance.

It is proposed that the government shall construct a reservoir that shall conserve an amount of water which with the natural flow of the Salt and its tributaries shall afford an ample supply for all the wants of the owners of a given extent of land. It should be an inflexible rule never to be departed from, that no right to the use of water from these sources should be accorded to the owner or occupant of one acre of land beyond the capacity of these sources of supply to fully and adquately furnish. If these conditions can be made to prevail, as long as they do prevail, then it matters not to Z that A is first in the list in point of time, for A and Z are equally supplied.

It would be disastrous if these conditions should change--that is, if the supply of water should become insufficient for the needs of all who shall have acquired a right to it. This could occur by the breaking away of the impounding dam, and we should then be remitted to the conditions that now prevail, and the natural flow of the Salt and its tributaries, as now, would be the supply and be, of course, insufficient for all; and the question then obtrudes itself, who should have the use of that water? The conditions having reverted to their present state, the rights of water users would naturally and logically also revert and be as they now are.

If by miscalculation, carelessness, want of foresight or other untoward cause, the right to use water from the reservoir was disposed of, or attempted to be disposed of, to the owners or occupants of a greater extent of land than can be justly supplied, there would be instantly a conflict of rights. If there were but water, of both stored and other water, enough for, say 200,000 acres, and rights had been issued to the owners and occupants of 300,000 acres, then there would be only two-thirds of a sufficient supply for all, or 100,000

acres that would be without any. The latter alternative is vastly more preferable, for land with an appreciably inadequate supply of water is in reality valueless. That conclusion is inevitable and has been demonstrated so often in history that it hardly needs the statement of it. Then the old question obtrudes itself--who of these owners of the 300,000 acres should have the adequate supply, and who of them none? Or should the whole 300,000 all go down in common disaster? Any policy that requires any water user to use less water than is necessary under the most economical and skillful cultivation and irrigation to make his lands the most productive, is a policy that leads to universal ruin.

It is not intended to say that it might not be good policy in a time of unexpected and sudden but temporary shortage of water to provide for a distribution of water that will save permanent growths as distinguished from annual or temporary ones--but this would be simply to meet an emergency and it is not obnoxious to, but rather proves the rule stated.

There is another consideration that is of very practical importance, and that is the question, who shall be the beneficiaries of the construction of the proposed reservoir?

It would seem that it would be the policy of the government to make up by means of stored water the deficient supply for those lands already imperfectly cultivated, because of this deficiency.

There is, it may safely be stated, more than 1,000,000 acres of land in this valley to which water could be distributed from the proposed Tonto reservoir, by the existing means of distribution if there were a sufficient supply of it. Some of it is absolutely

unreclaimed, some partially reclaimed and others nearly so, but none in practice as it has lately prevailed here, completely so.

If the reservoir is built and fulfills our expectations there will be no distinction in practice, in the distribution of stored water and other water, whatever its source, by the general reservoir and canal system. All will have the benefit of the water as it did naturally, and would again if not for the reservoir, naturally flow in the river, a large but indefinite part of which never has been appropriated. If it can be obtained there will be applications for water for the 1,000,000 or more acres susceptible of service. But there will not be enough. There can never be enough to meet the demand.

Then how shall applicants be served? It is the most logical, the most natural, the most just and the most practicable plan to meet the demands in the order of the existing appropriations until they are supplied, and if there be a surplus then to new lands acquired by homesteading under the provisions of the Newlands law.

Enough has been said to demonstrate the necessity of speedy and finally settling the question of priority of rights of land owners within the territory proposed to be supplied by the Tonto reservoir. Two plans suggest themselves, the selection of one or the other much depending upon the readiness with which the proposed beneficiaries approve of either.

One is by agreement of all the water users to submit the question of the date of appropriation, the extent of the appropriation and the manner of use to arbitrators selected under the statute, for award, for with a provision that the award shall be final, without appeal, and that the award be made a decree of court.

The other is to institute a suit in the district court for that purpose, having all the water users parties plaintiff or defendant with the incidental right of omitted parties, to make themselves parties; then have the case submitted to a referee to report to the court his conclusions as to time and extent of the appropriation of each party, and in due course a decree of the court thereon.

Of course it must be understood that nothing can be done or attempted to regulate the course of business of the courts by such an agreement.

Diligent work can accomplish this in a comparatively short time and the question laid away as settled.

It should be made a condition precedent to the acceptance of a subscription to the capital stock of the proposed association heretofore outlined, that the subscriber shall have agreed to submit these questions for settlement as proposed so that the extent and time of his appropriation shall have been determined by one or the other of these proceedings. After the determination of these rights the owners of them should be classified, each by the year of his appropriation.

Then, when the government is ready to issue rights the reservoir, preference should be given to applicants therefore according to the class in which their appropriations are found, giving preference to the oldest, thence in order of time to the newest.

Reasonable limitations of time should be imposed within which this preference should be exercised, imposing upon the delinquent the penalty of postponement to await his turn at the last.

It is of course contemplated that after the plan here pro-

An agitation for water storage was started by the old Phoenix and Maricopa County Board of Trade which appointed a committee of five, composed of S.M. McCowan, then Superintendent of the Indian School, B. Heyman, J. Ernest Walker, Vernon L. Clark and B.A. Fowler and this committee made its report on April 10th, 1900. This report was as follows:

"WATER SUPPLY
OF THE SALT RIVER VALLEY

History of Irrigation.

Irrigation, or the art of watering lands for agricultural purposes by artificial means, was practiced before history and prior to tradition. It had its birth in the needs and necessities of mankind. The cradle of human existence was placed in an arid region, similar in many respects to Arizona. The hot dry winds smote the struggling vegetation, causing it to wither and die. The sun rose and set in clear skies and there was no change, for every day was the same. The Patriarchs gathered their flocks and herds around some timid spring, or ancient well, and"all the country round about" was theirs, because of the possession of all the water.

As the years went by, the people began to increase and multiply, together with their herds and flocks. The country was explored for more water and journeys were undertaken into distant parts. Thus, the people became scattered and the country settled. With increase of flocks came prosperity and wealth, which brought ease and content and love of the land

posed shall be in operation, that there will be no pecuniary benefits accruing to the stockholders by way of profit of operation, and that when the cost of maintenance and operation shall have been provided for there can and will be no further charge to the water user.

It would require others than the compilers of this to make even an approximate estimate of the cost of and maintenance and operation and the probable income from sources other than the assessments against the stockholders.

The association will have no interest bearing debt to be charged up against the water users. The cost of management and administration can be reduced to the lowest possible limit by concentration and systematization. Taking these things into consideration it is conservative to say that the cost of water to the user ought not to exceed 75¢ per acre to the use per year. And this cost can be still further reduced from various sources of income.

The water impounded in the reservoir will afford power at a cost of one-fourth of that now paid for many times the amount now used in this valley, and even then produce a handsome income.

The cities and towns in the valleys will need a supply from which an important income can be derived. Power could be transmitted to pump water for the Pima Indians and the requirements for that purpose would hardly make an appreciable diminution of the whole amount developed, and would afford them a greater, more certain, more constant and a more reliable supply of water than they ever had. The power could be used to raise the water now stored and constantly renewed in the gravelly strata underlying the surface of the valley--an amount of important magnitude.

Viewing the matter from that of the extremest pessimist the prospect is almost dazzling. Taking the cost of the reservoir and of the system of distribution at the highest it can be expected. Reduce the amount of land to be irrigated to the least extent, within the certain knowledge of the most incredulous. Make liberal allowance for faults, improvidence, carelessness, mistakes and unskillful management and administration. Take into consideration disaster by flood. Ignore possible income from other sources other than from the stockholders themselves, and yet the result is of such magnificent proportions as to be alluring.

There are dangers, too, some of them already realized, that have crept insidiously upon us, and are yet more insidiously and steadily increasing, that we will be at least better equipped to confront.

For more than fifteen years under our very eyes, but seemingly unnoticed, there has been a constant diminution of the water flowing into this valley. Aside from unusual meterological conditions, prevalent for the three or four years last past, this is due to the constantly increasing diversion of water from the tributaries to our supply. And it is going on unchecked. It would be one of the most important functions of the proposed association to check this encroachment. That no attempt has heretofore been made to remedy this sufficiently suggests that while the present conditions of diversity and antagonism of interests continues in this valley it need not be expected. With unity of interest it may be hoped for.

We cannot console ourselves with the hope that matters wil

us cannot grow worse than they now are. Simple inactivity will make them worse. How much the prophet will tell you leaves a result not worth the computation.

Whether the government builds or aids in building the Tonto reservoir or not, to stay our progress to a disastrous end, there must be a unification of the interests of the water users of this valley. Instances or utter ruin that is inevitable under a continuance of the present conditions in this valley may easily be pointed out within easy search.

The plans and suggestions here submitted are tentative. It has not been attempted to work out every proposal in detail to its ultimate result. The result has been anticipated in each instance as desirable; the general means to the end has been suggested, and the filling in left for time for more and varied deliberation.

If the plans and suggestions do not, or some of them do and others do not, meet with approval, yet if they have the effect of pointing out other and better ones, this work will have justified itself.

--The Arizona Republican. Sept. 7, 1902.

Early in September, 1902, Judge Joseph H. Kibbey, the author of what was known as the "Kibbey Decision", presented to the committee a most comprehensive plan for proceedure: I wish here to pay a lasting tribute to Judge Kibbey for his plan was the basis of the articles of incorporation of the Salt River Valley Water Users'

Association, and they are almost entirely of his making. It is most interesting to read Judge Kibbey's plan which was reported in full in the Proceedings of the First Conference of Engineers of the Reclamation Service, held at Ogden, Utah, September 15th, to 18th, 1903.

This Water Storage Conference Committee appointed an Executive Committee of eleven which formulated a general plan of organization of the farmers and landowners of the valley into a co-operative water user's association which was reported to a mass meeting held October 4th, 1902, at which time subscription books were opened for what was known as a preliminary subscription giving approval of the plan. It was comparatively easy to secure this approval and there was signed up approximately 150,000 acres.

The meetings of the Executive Committee was continued during November and December, 1902 and January, 1903. It was comparatively an easy proposition to secure the approval of a general plan and quite another to blaze a new trail - to formulate without precedent or guide, articles of incorporation which should be broad in scope, clear in statement, carefully worded and legally phrased, just to all interests and adapted to existing conditions.

PROCEEDINGS OF FIRST CONFERENCE.

By B. A. Fowler.

Mr. B. A. Fowler, President of the Salt River Valley Water Users' Association, described the steps leading up to the organization of this association and the difficulties encountered.

The Salt River Valley Water Users' Association is the first organization created to operate under the terms of the reclamation law. Section 6 of that law states that "The management and operation of the irrigation works shall pass to the owners of the

land irrigated thereby, to be maintained at their expense, under such form of organization and under such rules and regulations as may be acceptable to the Secretary of the Interior."

Where there are considerable bodies of land in private ownership, and where a large number of persons must be dealt with, it is evident that the earlier organizations like those contemplated by the act are created, the more definitely will the work proceed. It is necessary, for promptness of action with these persons, to have a common agent or representative to transact business. In order, therefore, to bring about the construction of the Salt River dam in Arizona the above-named organization has been formed. Being the first of its kind, it was necessary to consider many matters which subsequent organizations will probably adopt without further thought.

The articles of incorporation, resulting from much deliberation and correspondence, are presented in the following pages. It is thought that these cover most of the requirements of law and good administration.

CONDITIONS IN SALT RIVER VALLEY.

The first irrigation ditch in Salt River Valley, Arizona, was dug in 1868. As the population increased other ditches and canals followed, until there are now about 14.

The early settlers had water in abundance, and no one then anticipated a scarcity; but as from time to time additional land was put under cultivation it became evident that the use of more economical methods, the better conservation of the normal supply, and the impounding of winter floods were of vital importance. Several unorganized and short-lived movements to procure a reservoir or some system of water storage for the valley were made prior to

1900, but these accomplished nothing except to arouse a temporary interest in the subject.

In April, 1900, the valley was beginning to feel the effects of a drouth which had continued for nearly two years with increasing severity. At that time the Phoenix and Maricopa County Board of Trade appointed a committee of five members to investigate and report upon conditions and needs and to devise ways and means for providing a water supply sufficient for the purposes of irrigation. This committee published a report the following month, which was widely circulated throughout the valley, and led to the calling of a mass meeting of the landowners on Friday, August 31, 1900, in the Grand Opera House at Phoenix. The auditorium was filled with an eager and interested assemblage of landowners from all parts of the valley, who continued in session all day.

As a result of this meeting a water-storage committee of 25 members was selected, each canal being represented, to which was added the five members of the board of trade committee. Immediately upon the adjournment of the meeting this committee organized, and on the following Monday held a meeting, at which a committee of five was appointed by the chair to nominate subcommittees to investigate and report upon various subjects connected with irrigation. Frequent meetings were held by the executive committee, and diligent investigation and correspondence were begun wherever the different committees thought to gain reliable information which might be utilized.

The interest of the entire valley had by this time become aroused to the paramount importance of the water question, and it was felt that far-reaching legislation on this subject would in all probability be enacted by the next territorial legislature. Accord-

ingly the friends of water storage, in November 1900, elected representatives to the body in sympathy with the movement, and also sent a delegate to the National Irrigation Congress, held at Chicago, Ill., the same month.

SURVEYS IN THE VALLEY.

About this time a letter was sent to the Secretary of the Interior by Mr. B. A. Fowler, as president of the Salt River Valley water-storage committee, setting forth the conditions existing in the valley and the action taken by the residents, and offering on their behalf to contribute the sum of $1,500, to be expended for investigations if an equal amount should be allotted from the funds of the United States Geological Survey. (See Water-Sup. and Irr. Paper No. 73, U. S. Geol. Survey, 1903, p. 10.)

This letter was referred to the Director of the Geological Survey, who replied to the Secretary of the Interior on January 14, 1901, recommending the expenditure.

Hydrographic work was pushed on Verde River through the winter and later in the Tonto Basin on Salt River. In the meantime an act was passed by the Arizona legislature, then in session, creating a "water-storage commission," providing for a tax levy of about $14,000 a year for two years for purposes specified, and authorizing the commission "to cooperate with or contribute toward the expenses of any investigations now being made or hereafter to be made by the United States Geological Survey."

The hydrographic and preliminary work continued throughout 1901 and into 1902. Up to this time efforts had been concentrated on procuring all reliable data obtainable before deciding how best to secure construction. There were many plans and schemes, but only two

with much favor. One was to make it an object for private capital to construct, the other was that the county should build and issue bonds in payment for the work. Both ways were beset with difficulties and risks, and each met with decided opposition. There were a few who dared hope for Government aid, and firmly believed that national irrigation was near at hand. But by the great majority these were called "rainbow chasers", "dreamers from dreamland," and considered a little "off."

PASSAGE OF THE RECLAMATION ACT.

Meanwhile the national irrigation movement was steadily growing, the country over, and finally crystallized into the reclamation act of June 17, 1902. Under it the people of Salt River Valley, or many of them at least, realized that they might become its beneficiaries, and without delay began to put themselves in harmony with its requirements, as they interpreted them. There was no official interpretation, no court construction, no authorities to be consulted. The only guide was the law itself--new, untried; a magnificent experiment.

MEETING AT PHOENIX.

A mass meeting was called in the court-house at Phoenix, August 2, 1902, at which was chosen a committee of 25 citizens, representatives of the various canals, to be known as "The Water Storage Conference Committee," which was organized one week later. At this meeting an invitation was extended to Mr. George H. Maxwell, executive chairman of the National Irrigation Association and the active exponent of its work, to come to the valley and assist in formulating a plan in accord with the national irrigation act. Responding to the invita-

tion, Mr. Maxwell came and addressed a large meeting of farmers and land-owners August 9, 1902, and outlined a plan of action, which met with general approval.

JUDGE KIBBEY'S ADDRESS.

Early in September, 1902, Judge H. Kibbey of Phoenix, author of the well-known "Kibbey decision," presented to the committee for consideration a plan, comprehensive in scope and rich in practical suggestions, drawn from a wide and varied experience of many years in dealing with such matters. In the statement of his plan Judge Kibbey said:

The earliest legislation in this Territory recognized the right of appropriation of water from its streams, lakes, etc., for, among other things, the cultivation of the soil, and recognized that appropriators are entitled to priority of use of the water in the order of the dates of appropriation, and, I think, by necessary inference, the right is appurtenant to the land for which it was appropriated, as the right was limited expressly to the owners or occupants of the lands.

In 1877 Congress, pursuing the long-settled policy of having actual tillers of the soil as the owners of the national domain, provided by the enactment of the "desert-land law" that the entryman could acquire title by paying a nominal sum per acre for the naturally desert land, and authorized him to appropriate water from the public sources of supply for its reclamation and cultivation. This law gave priority of right to such appropriators in the order of the times of appropriation, and upon proof of such reclamation and the permanent right to the use of water the Government transmitted to the entryman, by the same deed, a title to both land and

water. The latest act of Congress, the Newlands Act, contemplates that stored or other water impounded or developed under its provisions shall be used only by those acquiring the right to use it under the act, and that the right shall be inseparable from the land. Thus we have defined the status of the landowner who has a right to the use of water.

The acts constituting an appropriation of water are held to be--

(1) The diversion of the water from the source of supply.

(2) The conveyance of the water to the place of use.

(3) The actual use.

These different acts may be, and in practice in this valley are most frequently, performed by two different persons; that is, the diversion and carrying or conveyance is by one (an association or a corporation usually), and the actual use by another (the landowner or occupant). The landowner or occupant is the appropriator, for by the law he is the only one who can appropriate water, and the carrier is merely an agency adopted by the appropriator to effect the appropriation. The relation of the one, the appropriator, to the other, the carrier, must arise by contract, express or implied, or, if the term may be used to promote brevity of expression, by estoppel.

Now it is probable that of these propositions none will remain undisputed by some of those whose interests are, or seem to be, variant. The first, or, in any event, the most essential thing to be done, is to settle these disputed questions, and if success is to be attained it is submitted they must be settled as here stated. To settle them by simple agreement is impracticable, for that involves unanimity of all the disputants, which is hopeless; and it would be

that enriched. Then followed the wish to remain in the land of their hearts desire, and permanent improvements were made. Homes were built and wells were dug, from which the patient, plodding oxen laboriously raised the precious water in rude buckets made of skins, whence it was poured into tiny trenches which conducted it to the thirsty soil.

Thus, was begun the village system with its society features and cooperation.

Coming on down through years and years of struggle and warfare and tardy progress we stand upon the shores of the new world and see an Indian village with numerous tents gleaming like polished spearheads. Camp fires are lazily smoking. Herds of ponies are feeding near. Men are carving with much labor and infinite care their rude implements of warfare, or sleeping neath the forest shade, while women, like beasts of burden, are packing great Ollas of water upon their heads with which to moisten their tiny patches of garden.

Historians differ much as to what people first practiced the art of irrigation. Some claim the honor belongs to the Egyptians; some the Armenians; some the East Indians, and others the Chinese. Still others aver that the art was conceived by the Incas of Peru; others the Nahua nations, which include the Toltecs and Aztecs of Central America, Mexico and Arizona. The exact date has never been determined, and probably never will be. Moreover, to any one other than the antiquarian it does not matter.

REPORT OF

HISTORY OF PROJECT

BY

VERNON L. CLARK.

DECEMBER - 1936.